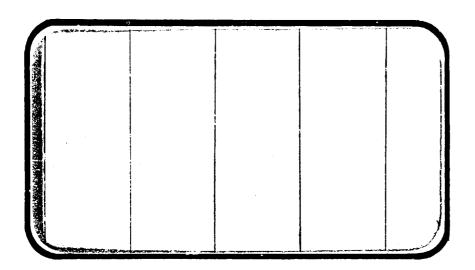
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

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(NASA-CR-141818) FESUITS OF A PRESSURE LOADS INVESTIGATION ON A G.O3O-SCALE MODEL (47-OTS) OF THE INTEGRATED SPACE SHUTTLE VEHICLE CONFIGURATION 5 IN THE NASA AMES RESEARCE CENTER 9 BY 7 FOOT LEG OF THE

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SPACE SHUTTLE

AEROTHERMODYNAMIC DATA REPORT

JOHNSON SPACE CENTER
HOUSTON, TEXAS

DATA MANagement services

SPACE DIVISION CHRYSLER

DMS-DR-2194 NASA CR-141,818

RESULTS OF A PRESSURE LOADS INVESTIGATION

ON A 0.030-SCALE MODEL (47-0TS) OF THE

INTEGRATED SPACE SHUTTLE VEHICLE CONFIGURATION

5 IN THE NASA AMES RESEARCH CENTER 9 x 7

FOOT LEG OF THE UNITARY PLAN WIND TUNNEL (IA81B)

VOLUME 2 OF 5

by

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Rockwell International Space Division

Prepared under NASA Contract Number NAS9-13247

bу

Data Management Services Chrysler Corporation Space Division New Orleans, La. 70189

for

Engineering Analysis Division

Johnson Space Center
National Aeronautics and Space Administration
Houston, Texas

WIND TUNNEL TEST SPECIFICS:

Test Number:

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NASA Series Number:

IA81B

Model Number:

47-0TS August 6-22, 1974

Test Dates: Occupancy Hours:

208

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RESULTS OF A PRESSURE LOADS INVESTIGATION ON A 0.030-SCALE MODEL (47-0TS) OF THE INTEGRATED SPACE SHUTTLE VEHICLE CONFIGURATION 5 IN THE NASA AMES RESEARCH CENTER 9 x 7 FOOT LEG OF THE UNITARY PLAN WIND TUNNEL (IA81B)

by

E. Chee, Rockwell International Space Division

ABSTRACT

Presented in this report are results of wind tunnel test IA81B. The model tested was a 0.030-scale model of the Integrated Space Shuttle

Vehicle Configuration 5. Testing was conducted in the NASA Ames Research

Center 9 x 7-foot Unitary Plan Wind Tunnel to investigate pressure distributions for aeroloads analysis at Mach numbers from 1.55 through 2.5.

Angles of attack and sideslip were varied from -6 to +6 degrees.

This report consists of 1 volume of force data and 4 volumes of pressure data for a total of 5 volumes. They are arranged in the following manner:

Volume No.	Contents	
1	IA81B force data	
2	IA81B plotted pressure data	
3	IA81B tabulated pressure data	
	(a) orbiter fuselage(b) left lower wing surface	pages 1-299 pages 300-728

ABSTRACT (Concluded)

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5	IA81B tabulated pressure data	
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- B) CY, CYNF, CBL versus BETAI CY versus CYNF CY versus CBL
- C) CHEO, CHEI versus ALPHAO
- D) CABO versus ALPHAO
- E) CABET versus ALPHAT
- F) CABSRB versus ALPHAL
- G) CABSRB versus ALPHAR
- H) CAFAFO versus MACH
- I) XAC/LV versus MACH
- J) CNALFA versus MACH
- K) YAC/LV versus MACH
- L) CYBETA versus MACH
- M) CHEO, CHEI versus MACH
- N) DCAF, DCNF, DCLMF versus MACH
- 0) CP versus X/LB
- P) CP versus X/LT
- Q) CP versus X/LS
- R) CP versus X/CV
- S) CP versus X/CW

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NOMENCLATURE General

SYMBOL	PLOT SYMBOL	DEFINITION
<u> </u>		speed of sound; m/sec, ft/sec
c_p	CP	pre:sure coefficient; $(p_l - p_{\infty})/q$
M	масн	Mach number; V/a
p		pressure; N/m², psf
ď	Q(NSM) Q(PSF)	dynamic pressure; 1/2 pV ² , N/m ² , psf
RN/L	rn/l	unit Reynolds number; per m, per ft
V	•	velocity; m/sec, ft/sec
α .	ALPHA	angle of attack, degrees
β	BETA	angle of sideslip, degrees
ψ	PSI	angle of yaw, degrees
φ.	PHI	angle of roll, degrees
P		mess density; kg/m ³ , slugs/ft ³
	Refe	erence & C.G. Definitions
Аъ		base area; m ² , ft ²
b	BREF	wing span or reference span; m, ft
c.g.		center of gravity
L REF	LREF	reference length or wing mean serodynamic chord; m, ft
S	SREF	wing area or reference area; m ² , ft ²
	MRP	moment reference point
	XMRP	moment reference point on X axis
	YMRP	moment reference point on Y axis
	ZMRP	moment reference point on Z axis
SUBSCRIPT b i s t	<u>s</u>	base local static conditions total conditions free stream

Body-Axis System

SYMBOL	PLOT SYMBOL	DEFINITION
c ^M	CIN	normal-force coefficient; $\frac{\text{normal force}}{qS}$
c _A	CA	exial-force coefficient; exial force
$c_{\mathbf{Y}}$	CY	side-force coefficient; $\frac{\text{side force}}{qS}$
c_{A_b}	CAB	base-force coefficient; $\frac{\text{base force}}{q^S}$
		$-A_b(p_b - p_{\infty})/qS$
$\mathtt{c}_{\mathtt{A_f}}$	CAF	forebody sxial force coefficient, $C_{\mbox{\scriptsize A}}$ - $C_{\mbox{\scriptsize A}_{\mbox{\scriptsize b}}}$
C _m	CLM	pitching-moment coefficient; pitching moment qSLREF
c_n	CYN	yawing-moment coefficient; yawing moment qSb
c.į	CBL	rolling-moment coefficient; rolling moment qSb
		Stability-Axis System
$c_{\mathbf{L}}$	CL	lift coefficient; Lift qS
c_D	CD	drag coefficient; drag
$^{\mathtt{C}_{\mathbf{D_b}}}$	CDB	base-drag coefficient; base drag
$\mathbf{c_{D_f}}$	CDF	forebody drag coefficient; $C_D - C_{D_b}$
$\mathtt{C}_{\mathbf{Y}}$	CY	side-force coefficient; side force qS
$C_{\mathbf{m}}$	CLM	pitching-moment coefficient; pitching moment qs/REF
c_n	CLN	yawing-moment coefficient; yawing moment qSb
° L	CSL	rolling-moment coefficient; relling moment qSb
r/d	L/D	lift-to-drag ratio; C _L /C _D

NOMENCLATURE (Continued) Additions to Standard Nomenclature

Symbol	Plot Symbol	Defintion
$A_{b_{ET}}$		external tank base area, ft ²
A _{bf}		body flap upper surface area, ft ²
A _{bo}		Orbiter base area, ft ²
A _{boms}		OMS pod base area, ft ²
A _{bSRB}		SRB base area, ft ²
$^{\mathrm{C}}_{\mathrm{A}_{\mathrm{b}_{\mathrm{ET}}}}$	CABET	external tank base axial force coefficient
$c_{A_{D_0}}$	CABO	Orbiter base axial force coefficient
c _{Absrb}	CABSRB	SRB base axial force coefficient
$c_{A_{ET}}$		external tank total axial force coefficient
c _{AfET}		external tank forebody axial force coefficient
$^{\text{C}}_{\text{A}_{f_o}}$		Orbiter forebody axial force coefficient
c _{Afsrb}		SRB forebody axial force coefficient
c _{Ao}		Orbiter total axial force coefficient

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Symbol	Plot <u>Symbol</u>	Definition
c _{Pboms}		OMS pod average base pressure coefficient
C _P b _{SRB}		SRB average base pressure coefficient
$c_{\mathbf{p}_{\mathbf{i}}}$		pressure coefficient associated with i tap
ET		external tank
i _{bo}		Oribter base incidence angle to a line of constant $\mathbf{X}_{\mathbf{O}}$, deg.
[£] b		Orbiter fuselage length, in.
MRP		moment reference point
OMS		orbital manuvering system
RN/FT	RN/L	unit Reynolds number, million per foot
S _e		elevon surface area, ft ²
SRB		solid rocket booster
X _{bf}		longitudinal distance from MRP to bodyflap area centroid, in.
x _b o		longitudinal distance from MRP to Orbiter base area centroid, in.
X/C	X/CW	chordwise location on wing
X/Cv	X/CV	chordwise location on vertical tail
X _o		Orbiter longitudinal station, in.
X _o /L _o	X/LT	location on Orbiter, fraction of Orbiter body length aft of Orbiter nose

Symbol .	Plot Symbol	Definition
C _{ASRB}		SRB total axial force coefficient
$\bar{c}_{\mathbf{e}}$		elevon mean aerodynamic chord, in
$^{C_{h}}_{e_{\mathtt{I}}}$	CHEI	inboard elevon hinge moment coefficient
$c_{h_{\mathbf{e}_{_{\mathbf{o}}}}}$	CHEO	outboard elevon hinge moment coefficient
c _m bf	CMBF	bodyflap upper surface pitching moment coefficient
c _{mbo}	CMB0	Orbiter base pitching moment coefficient
$c_{m_{\mathbf{f_o}}}$		Orbiter forebody pitching moment coefficient
C _{mo}		Orbiter total pitching moment coefficient
$c_{n_{bf}}$		bodyflap upper surface normal force coefficient
$^{c}N_{b_{o}}$		Orbiter base normal force coefficient
c _{Nfo}		Orbiter forebody normal force coefficient
$c_{N_{\mathbf{O}}}$		Orbiter total normal force coefficient
c _{PbET}		external tank average base pressure coefficient
c _{Pbf}		bodyflap average upper surface pressure coefficient

Symbol	Plot Symbol	<u>Definition</u>
c _{Pbo}		Orbiter average base pressure coefficient
xs	XS	SRB longitudinal station, in.
x _s / _s	X/LS	location on SRB, fraction of SRB body length aft of SRB nose
X _T	χT	external tank longitudinal station, in.
X _T /L _T	X/LT	location on ET, fraction of ET body length aft of ET nose
Yo	Y0	Orbiter lateral station, in.
YS	YS	SRB lateral station, in.
YT	YT	external tank lateral station, in.
z _{bo}		vertical distance from MRP to Orbiter base area centroid, in.
Z _o	Z0	Orbiter vertical station, in.
z _s	ZS	SRB vertical station, in
z _T	ZT	external tank vertical station, in.
^α o	ALPHA0	Orbiter angle of attack, degrees
۴۶ _۲	ALPHAL	left SRB angle of attack, degrees
^α S _R	ALPHAR	right SRB angle of attack, degrees
αT	ALPHAT	external tank angle of attack, degrees
βo	BETAO	Orbiter angle of sideslip, degrees

Symbol	Plot Symbol	Definition
$^{g}B_{L}$	BETAL	left SRB angle of sideslip, degrees
$^{g}s_R$	BETAR	right SRB angle of sideslip, degrees
$^{\beta}T$	BETAT	external tank angle of sideslip, degrees
$^{\delta}$ e _i	ELV-IB	inboard elevon deflection angle, degrees
$^{\delta}$ e $_{o}$	ELV-OB	outboard elevon deflection angle, degrees
^δ R	RUDDER	rudder deflection angle, degrees
δ _{SB}	SPDBRK	speedbrake deflection angle, degrees
η	2Y/b	spanwise station, 2Y/b
ф	PHI	radial location, degrees
c_{A_C}		orbiter sting cavity axial force coefficient
β _I	BETAI	integrated vehicle angle of sideslip, degrees
$^{\alpha}I$	ALPHAI	integrated vehicle angle of attack, degrees
X/LB	X/LB	longitudinal position/body length (fuselage)
Y/BW	Y/BW	local spanwise position/wing span
Z/BV	Z/BV	local spanwise position/vertical tail span

Symbol	Plot Symbol	<u>Definition</u>
c _{nf}	CYNF	forebody yawing moment coefficient, body axis system
c_{m_f}	CLMF	forebody pitching moment coefficient
c_{N_f}	CNF	forebody normal force coefficient
$c_{A_{f_{o}}}$	CAFAF0	forebody axial force coefficient at zero alpha
$c_{N_{\alpha}}$	CNALFA	derivative of normal-force coefficient with respect to alpha, per degree
X _{cp} /l _v	XAC/LV	vertical tail chordwise center of pressure location
Y _{cp} /l _v	YAC/LV	vertical tail spanwise center of pressure location
CYB	CYBETA	derivative of side-force coefficient with respect to beta, per degree
ΔC_{A_f}	DCAF	incremental forebody axial force coefficient
$\Delta c_{N_{ extbf{f}}}$	DCNF	incremental forebody normal force coefficient
ΔCmf	DCLMF	incremental forebody pitching moment coefficient
CHMI	CHM1	contributions of the forward bridge to the inboard elevon hinge moment coefficient
CHM2	CHM2	contributions of the aft bridge to the inboard elevon hinge moment coefficient
CHM3	CHM3	contributions of the forward bridge to the outboard elevon hinge moment coefficient
CHM4	CHM4	contributions of the aft bridge to the outboard elevon hinge moment coefficient

NOMENCLATURE (Concluded)

Data Set Identifiers

The fourth letter of the data set identifier indicates the component, e.g., $\text{RET}\underline{\text{T}}\text{O}4$.

Force

0	Orbiter
T	External Tank
L	Left SRB
R	Right SRB
Н	Orbiter - Hinge moment
I	Integrated Vehicle

Pressure

В	Orbiter Fuselage
L	Left Wing lower surface
U	Left Wing upper surface
W	Right Wing lower surface
R	Right Wing upper surface
٧	Left Vertical Tail
S	SRM Booster
T	External Tank
С	Miscellaneous Orifices

CONFIGURATIONS INVESTIGATED

The model was a 0.030-scale representation of the Rockwell International Space Shuttle Integrated Vehicle. The Orbiter was per VL70-000140A/B lines. The external tank represented VL78-000063 lines. The solid rocket motors were per VL72-000066 lines. Figures 2a, b, and c present sketches of the model configuration. Model simulation included attach structure protuberances, fairings, fuel feed lines, vent lines, etc. (basic model construction was of ARMCO 17-4 steel).

Model forces and moments were measured by 3 Task Corporation six component balances. A 2.5 in. MK XXA was mounted in the Orbiter. A 2.0 in. MK IIIC was mounted in the external tank. A 1.5 in. MK IIC was mounted in the LH SRB. The balances are attached to stings entering each component through the base areas. Figures 2m and 2n show the balance locations in the model. The RH wing inboard and outboard elevon panels are instrumented with hinge moment gages as shown in figure 1c.

Surface and base pressures were measured on the Orbiter, external tank and solid rocket motors. The Orbiter was instrumented with a total of 480 pressure-orifices, of which 6 were base and cavity pressures. The external tank was instrumented with a total of 314 pressure orifices. The LH SRM was instrumented with a total of 149 pressure orifices. Orifice locations are presented in tables IV through VIII and figures 2d through 21.

The following model shorthand configuration notation was used: LVA' = AT_{28} thru 32 FL₁₀ FL₁₁ FR₁₀ N₈₆ O₁ PT₁₂ PT₂₂₋₂₇ S₂₁ T₂₈

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CONFIGURATIONS INVESTIGATED (Concluded)

 AT_{28} thru 32 = Attach hardware structure

 FL_{10} = LH_2 feedline

 FL_{11} = $L0_2$ feedline

 FR_{10} = Umbilical door fairing

N₈₆ = Nozzles for solid rocket boosters

 0_1 = $B_{26} C_9 E_{44} F_9 M_{16} N_{28} R_5 V_8 W_{116}$

 PT_{12} = Lightning rod on nose of T_{28}

PT₂₂ thru ₂₇ = External protuberance

S₂₁ = Solid rocket boosters

T₂₈ = External tank

Where model dimensions are as described in table III. The LVA' configuration was tested with speed brake gap both sealed and open and with elevon gap both sealed and open. The (instrumented) right elevon gap was sealed by a permanent sponge rubber seal. The left elevon gap was sealed with plaster. Speed brake gaps were sealed by red wax.

TEST FACILITY DESCRIPTION

The Ames Research Center 9 by 7 foot Supersonic Wind Tunnel is a closed-circuit, air-medium, variable-density facility capable of attaining Mach numbers from 1.55 to 2.50 at Reynolds numbers from 1.5 x $10^6/\mathrm{ft}$ to 6.5 x $10^6/\mathrm{ft}$. The 18 foot long test section is part of a dual system of supersonic circuits and uses the same motors and compressor as the 8 by 7 foot tunnel. A sliding-block throat arrangement is used to control tunnel Mach number.

Models are supported by means of stings attached to the wall-to-wall strut/BOR system of the 9 by 7 foot tunnel.

Schlieren photograph, shadowgraphs, and pressure monitoring instrumentation are available.

DATA REDUCTION

All balances data were reduced to coefficients about a moment reference point located at:

$$X_{T} = 976.0 in.$$

$$Y_T = 0.0 in.$$

$$Z_{T} = 400.0 in.$$

The following reference dimensions were used:

$$S = 2690.0 \text{ ft}^2$$

$$\ell_{\rm b}$$
 = 1297.0 in.

Hinge moment data were reduced about their respective hinge lines using the following reference values:

$$S_{g} = 210.0 \text{ ft}^{2}$$

$$\bar{c}_{e} = 90.7 \text{ in.}$$

Base and forebody coefficients were calculated as follows:

$$c_{nb_0} = -c_{pb_0} \frac{A_{b_0}}{S} = \tan i_{b_0} - c_{pboms} \frac{A_{b_0ms}}{S}$$

$$c_{N_{bf}} = -c_{P_{bf}} \frac{A_{bf}}{S}$$

$$c_{A_{b_0}} = -c_{P_{b_0}} \frac{A_{b_0}}{S} - c_{P_{b_0MS}} \frac{A_{b_{0MS}}}{S}$$

DATA REDUCTION (Continued)

$$C_{A_{b}SRB} = -C_{P_{b}SRB} \frac{A_{b}SRB}{S}$$

$$C_{m_{b_{0}}} = -\frac{x_{b_{0}}}{z_{b}} C_{N_{b_{0}}} + \frac{z_{b_{0}}}{z_{b}} C_{A_{b_{0}}}$$

$$C_{m_{b_{0}}} = -\frac{x_{bf}}{z_{b}} C_{N_{bf}}$$

$$C_{N_{f_{0}}} = C_{N_{0}} - C_{N_{b_{0}}} - C_{N_{bf}}$$

$$C_{m_{f_{0}}} = C_{m_{0}} - C_{m_{b_{0}}} - C_{m_{bf}}$$

$$C_{A_{f_{0}}} = C_{A_{0}} - C_{A_{b_{0}}}$$

$$C_{A_{f_{ET}}} = C_{A_{ET}} - C_{A_{b_{ET}}}$$

$$C_{A_{fSRB}} = C_{A_{SRB}} - C_{A_{bSRB}}$$

$$A_{b_{ET}} = 597.56 \text{ ft}^{2}$$

$$A_{b_{0}} = 142.6 \text{ ft}^{2}$$

$$A_{b_{0}} = 314.10 \text{ ft}^{2}$$

$$A_{b_{0MS}} = 122.57 \text{ ft}^{2}$$

 $(\underline{\mathbb{L}})$

DATA REDUCTION (Concluded)

$$A_{b_{SRB}}$$
 = 201.07 ft²
 $i_{b_{0}}$ = 14.75°

 X_{bf} = 1329.7 in.

 $X_{b_{0}}$ = 1263.0 in.

 $Z_{b_{0}}$ = 336.5 in.

Base pressure coefficients represented the average pressure on the respective bases. Body flap pressure coefficients were as given by figure 20.

Right SRB forces and moments were calculated as a mirror image of left SRB forces and moments about $\beta=0$:

$$\begin{pmatrix}
\text{Coefficient on} \\
\text{Right SRB} \\
\text{at } +\beta
\end{pmatrix} = \begin{pmatrix}
\text{Coefficient on} \\
\text{Left SRB} \\
\text{at } -\beta
\end{pmatrix}$$

Forces and moment on each component (Orbiter, ET, left SRB, and right SRB) were interpolated versus the respective angle of attack and angle of sideslip of each component to nominal angles. These data were then added to provide total integrated vehicle forces and moments.

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TEST: IA81B DATE: 8-23-74 **TEST CONDITIONS** REYNOLDS NUMBER DYNAMIC PRESSURE STAGNATION TEMPERATURE MACH NUMBER (per foot) (pounds/sq. inch) (degrees Fahrenheit) 2.50×10^6 1.55 3.189 120 2.50×10^6 2.00 3.189 120 2.20 2.50×10^6 3.750 120 2.50 2.50×10^{6} 3.472 120 Task Corp 2.5" MK XXA, 2.0" MKIIIC, 1.5" MKIIC BALANCE UTILIZED: COEFFICIENT CAPACITY: 2.0" 1.5" TOLERANCE: NF 6000 1800 1000 3000 SF 900 500 600 AF 500 100 PM 4000 RM 1000. 800 YM COMMENTS:

TARIF II

									4	•								
TEST		IA8/8 97-019		۵	DATA	SET/RUN NUMBER	NO.	4UME	SER COL	COLLATION SUMMARY	UMMARY		DATE	00	-23-	74		
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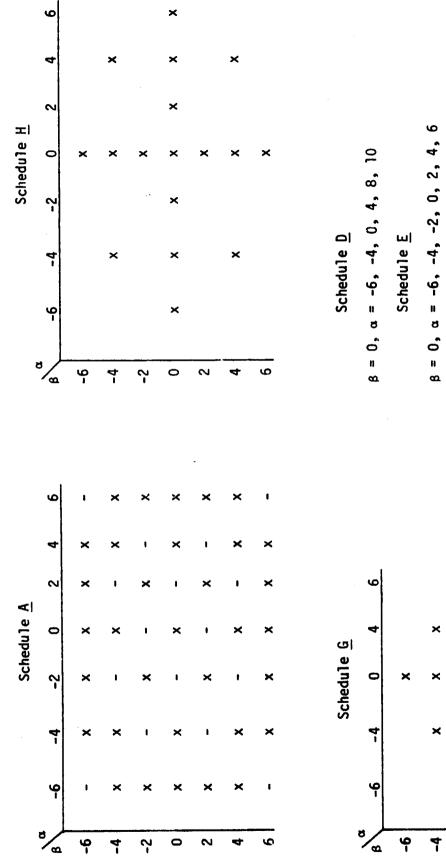
TABLE II (Continued)

	DATASET							!		
COMPONENT	IDENTIFIER	INDEPENDENT VARIABLES			FORCE (CEFFIC	FORCE COEFFICIENT SCHEDULE	HEDULE		
Orbiter	RETGXX	BETAO ALPHAO	CNF	CLMF	са су	ک	CYNF	CBL	*CABT	CAF
External Tank	RETTXX	BETAT ALPHAT	CNF	CLMF	S	CA CY	CYNF	CBL	CABT	CAF
Left SRB	RETLXX	BETAL ALPHAL	CNF	CLMF	CA	ک	CYNF	CBL	CABT	CAF
Hinge Moment	RETHXX	BETAO ALPHAO	CHEI	СНЕО	CHM1	CHM1 CHM2	СНМЗ	СНМ4		

* Where CABT is $C_{A_b}^{} + C_{A_c}^{}$ for each vehicle component.

TABLE II (Concluded)

Nominal a or ß Schedules



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 $\beta = 0$, $\alpha = -6$, -4, 0, 4, 8

Schedule I

TABLE III. - MODEL DIMENSIONAL DATA

MODEL COMPONENT: ATTACH STRUCTURE - AT28

GENERAL DESCRIPTION: Rear orbiter to ET attach structure (LH and RH). 2 Members.

MODEL SCALE:	0.030		MODEL	DRAWING NO.:	
RAWING NO.:	VL78-000063, -0000	062B			
DIMENSIONS:		MEMBER		FULL SCALE	MODEL SCALE
		#1.	x _o	1317.00	39.51
			Yo	<u>- 96.50</u> (L	H) <u>- 2.895</u>
				<u>96.50</u> (R	i) <u>2.895</u>
			z_{o}	267.50	8.025
			$\mathbf{x_T}$	2058.00	61.740
			$\mathbf{Y}_{\mathbf{T}}$	<u>- 125.68</u> (1	H) <u>3.770</u>
				<u>125.68</u> (I	RH) <u>3.770</u>
			$z_{\mathbf{T}}$	515.5	15.465
		#2	x _o	1317.00	39.51
			Yo	<u>- 96.50</u> (LE	1) - 2.895
				96.50 (RE	2.895
			z _o	267.50	8.025
			$\mathbf{x_T}$	1872.00	56.160
			$\mathbf{Y}_{\mathbf{T}}$	(LH) - 3.770
				125.68 (RE)
			$\mathbf{z_{T}}$	504.5	135
Diameter	, In.	# 1		11.5	0.345
		#2		15.5	0.465

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: ATTACH STRUCTURE - AT 29

GENERAL DESCRIPTION: Right-hand umbilical fairing to ET cross member attach structure (1 member).

MODEL SCALE: 0.030	MODEL DRAWII	NG NO.:	
DRAWING NO.: VL78-000062B, -Martin Mar	ietta 826002	07000	
DIMENSIONS:		FULL SCALE	MODEL SCALE
Umbilical fairing attach point:	x _o	1317.00	39.510
	Yo	66.316	1.989
	Zo	247.182	7.415
•	$\mathbf{x_{T}}$	_2058.683	61.740
1	YT	66.316	<u>1.989</u> .
	$\mathbf{z_{T}}$	<u>583.683</u>	17.510
ET attach point:	$\mathbf{x_{T}}$	2058.00	61.740
	YT	- 12.00	- 0.360
	$z_{f T}$	568.25	_17.04°
	Xo	1317.00	39.510
	Yo	- 12.00	- 0.36
	z_{o}	60.75	1.823
Attach structure dia., in.		4.5	0.135

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: ATTACH STRUCTURE - AT30

GENERAL DESCRIPTION: Forward SRB to ET attach structure (LH and RH).

MODEL SCALE: 0.030

DRAWING NO.: VL78-000066, Martin Marietta 82600204300

DIMENSIONS:		FULL SCALE	MODEL SCALE
Attach point	$x_{\mathbf{T}}$	985.675	29.570
	YŢ	-172.50 (LH 172.50 (RH	
	$\mathbf{Z}_{\mathbf{T}}$	0.0	0.0
	Xs	442.675	13.280
	λã	80.00	2.400
	Zs	0.0	0.0
	Xo	244.675	7.340
	Yo	- 184.5 (LH)	5.535 5.535
	20	0.0	0.0

MODEL COMPONENT: ATTACH STRUCTURE -	• AТ ₃₁			
GENERAL DESCRIPTION: Rear ET to SH	RB attac	ch struc	ture (LH & RH)	, 3 members.
MODEL SCALE: 0.030		:	MODEL DRAWING:	
DRAWING NO.: <u>VL78-0006</u> 3, -0000	062B, - (000066		
DIMENSIONS:	EMBER		FUIL SCALE	MODEL SCALE
	#1	XT YT ZT X _S Y _S Z _S	2058.00 - 171.50 (L 171.50 (R 457.00 1511.00 - 53.24 57.00	
	#2	XT YT ZT Xs Ys Zs	2058.00 - 163.58 449.81 1511.00 - 76.56 - 15.73	61.74 - 4.916 13.494 45.33 2.297 0.472
	# 3	XT YT ZT X _S Y _S Z _S	2058.00 - 161.72 343.00 1511.00 53.24 - 57.00	61.74 - 4.852 10.29 45.33 1.597 - 1.710
Diameter of members, In.:	# 1			
	#2			
	#3			

MODEL COMPONENT: ATTACH STRUCTURE - AT32

GENERAL DESCRIPTION: Forward orbiter ET attach structure (2 member structure)

MODEL SCALE: 0.030

DRAWING NO.: VL78-000062B, Martin Marietta 8260020914				
dimensions:	MEMBER		FULL SCALE	MODEL SCALE
	約	x _o	388.15	11.6445
		Yo	0.0	0.0
	(Attach pt on orb Z_{T} 614) Z _o	LWR ML	IWR MI.
		x _T	1129.9	34.05
		YT	46.50	1.395
	(Attach pt on tank)	z_{T}	562.58	16.877
	#2	X _o	388.15	11.645
		Yo	0.0	0.0
		z _o	LWR ML	LWR ML
		ХŢ	1129.9	34.05 -
		ľ	- 46.50	- 1.395
		$z_{ m T}$	562.58	16.877
Diameter,	In.		6.0	0.180
	#2		6.0	0.180

MODEL COMPONENT : BODY - Boo			
GENERAL DESCRIPTION: Configuration 14	OA'B orbiter fus	elage	
NOTE: B26 is identical to B24 except u	underside of fuse	lage has been	
refaired to accept W ₁₁₆ .			
MODEL SCALE: 0.030 MODEL DRAWING	NO.: SS-A00147	Rel. 12.	
DRAWING NUMBER:VI_70000143B,000200,000205,006089,000145,000140B			
DIMENSIONS: Length (OML: Fwd Sta. X _o =235),	FULL SCALE In. 1293.3	MODEL SCALE 38.799	
Length (IML: Fwd Sta. $X_0=238$),	In. 1290.3	38.709	
Max Width (@ $X_0 = 1528.3$), In.	264.0	7.920	
Max Depth (@ $X_0 = 1464$), In.	250.0C	7.500	
Fineness Ratio	0.264	0.254	
Area - Ft. ²			
Max. Cross—Sectional	340.88	0.307	
Planform			
Wetted	-		
Base	•		

MODEL COMPONENT : CANOPY - Co		
GENERAL DESCRIPTION :Configuration	3A. Canopy use	ed with fuselage B ₂₆
		
MODEL SCALE: 0.030	MODEL DWC N	NO.: SS-A00147
		10.: 35-A00147
DRAWING NUMBER: VL70-000143A		
DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (X ₀ =434.643 to 578), In	. 143,357	4.301
Max Width (X _o = 513.127), In.	152.412	4.572
Max Depth (At $X_0 = 485$.), In.	25.000	0.750
Fineness Ratio		
Area		
Max. Cross-Sectional		
Planform		
Wetted		
Base		

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: FLEVON - E.		
GENERAL DESCRIPTION: 6.0 In. F.S. gaps machidocrs, centerbody pieces, and tipseals are no one of two sides).	• •	
MODEL SCALE: 0.030		
DRAWING NUMBER: Not available		
DIMENSIONS:	FULL-SCALE	MODEL SCALE
Area Ft ²	210.0	0.189
Span (equivalent), In.	349.2	10.476
Inb'd equivalent chord , In.	118.0	3.54
Outb'd equivalent chord, In.	55.19	1.356
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	0.2096	0.2096
At Outb'd equiv. chord	0,2096	0.2096
Sweep Back Angles, degrees	•	
Leading Edge	0.00	0.00
Trailing Edge	- 10.056	- 10.056
Hingeline (Product of area & c)	0.00	0.00
Area Moment (Novma@odoobcogeoddoe), Ft.3	1587.25	0,0429
Mean Aerodynamic Chord, In.	90.7	2.721

MODEL COMPONENT : RODY FLAP - F.	·)	
GENERAL DESCRIPTION :Configurat	ion 140 A'B	
		*:
MODEL SCALE: 0.030		
DRAWING NUMBER: VI.70-000140B00	00200	
DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (Chord), In.	84.7	2.541
Max Width , In.	262.308	7.869
Max Depth , In.	23.00	0.690
Fineness Ratio		
Area - Ft ²		
Max. Cross-Sectional		
Planform	142.60	0.128
Wetted		
Base	41.90	0.0377 `

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: FEEDLINE - FL10

GENERAL DESCRIPTION: LH_2 feedline or upper left-hand side of T_{28} .

MODEL SCALE: 0.030

DRAWING NO.: VL78-000063, -000062B

DIMENSIONS:		FULL SCALE	MODEL SCALE
Leading edge at:	XT	2071.5	62.145
,	YT	- 70.3	- 2.100
	z_{T}	573.934	17.218
Trailing edge at:	$\mathbf{x_{T}}$	2081.80	62.454
	YT	- 70.00	- 2.10
	$\mathbf{z_{T}}$	584.059	17.522
Diameter of line (17.0 I.D.))	18.160	0.545

MODEL COMPONENT: FEEDLINE -	FL ₁₁	
GENERAL DESCRIPTION: LO2 feedlin	e on upp	er right-hand of T ₂₈ .
		· · · · · · · · · · · · · · · · · · ·
MODEL SCALE: 0.030		**************************************
DRAWING NO.: VL78-00063, VL78-	000062B	3
DIMENSIONS:		FULL SCALE MODEL SCALE
Leading edge at:	X _T	1000.667 30.02
	Y _T	70.00 2.10
	\mathbf{z}_{T}	<u>150.5</u> 19 4. 516
Trailing edge at:	XT	2071.5 62.145
	YT	70.00 2.100
	\mathbf{z}_{T}	573.934 17.218
Line diameter (17.0 L.D.)		(O.D.) 18.16 0.545

MODEL COMPONENT: FAIRING - FR10

GENERAL DESCRIPTION: Umbilical door fairing between aft ET/orbiter

attach structure.

MODEL SCALE: 0.030

DRAWING NO.: VL78-000063, -0000628, Martin Marietta 82600207000

DIMENSIONS:	FULL SCALE	MODEL SCALE
Leading edge at	2052.0	61.74
Length	193.0	5 .7 9
Width	15.0	0.45

MODEL COMPONENT: OMS POD - MIG		
	<i>i</i> 1·	
GENERAL DESCRIPTION: Configuration 1400	orbiter OMS mod	short pod
	A.e.	
	·	
MODEL SCALE: 0.030		
DRAWING NUMBER VI.70-0084010	08/10	
DIMENSION:	FULL SCALE	MODEL SCALE
Length (OMS Fwd Sta. X _o =1310.5), In.	258.50	7.755
Max Wide (@ $X_0 = 1511$), In.	136.8	4.104
Max Dep:h (@ $X_0 = 1511$), In.	74.70	2.241
Fineness Ratio	2.484	2.484
Area - Fi ²		
Max Cross-Sectional	58.864	0.053
Planform ·		***************************************
Wetted		
Base		

MODEL COMPONENT: OMS NOZZIES - N28	·			
GENERAL DESCRIPTION: Configuration 1404 'B orbiter OMS Nozzles				
MODEL SCALE: 0.030		÷		
DRAWING NUMBER: VL70-000140A (location), CS-	A00106. Rel. 5 (0	ontour)		
DIMENSIONS:	FULL SCALE	MODEL SCALE		
MACH NO.				
Length - In. Gimbal Point to Exit Plane Throat to Exit Plane				
Diameter - In. Exit Throat Inlet				
Area - ft ² Exit Throat				
Gimbal Point (Station) In. Left Upper Nozzle Xo Yo Zo	1518.00 - 88.0 492.00	45.54 2.64 14.76		
Pight bower Nozzle Yo Yo Zo	1518.00 88.0 492.00	45.54 2.64 14.76		
Null Position - Deg. Left Upper Nozzle Pitch Yaw	15°491 12°171	15°49! 12°17!		
Right hower Nozzle Pitch Yaw	15°49'	15°49' 12°17'		

MODEL COMPONENT: BSRM NOZZLE - N86

GENERAL DESCRIPTION: Booster solid rocket motor nozzles.

MODEL SCALE: 0.030

DRAWING NO.: VL70-00066

DIMENSIONS:	FULL SCALE	MODEL SCALE
Diameter, Dex - In. (I.D.)	144.29	4.3287
Diameter, D _{ex} - In. (O.D.)	146.79	4.4037
Diameter, DT - IN.		
Diameter, D _{in} - In.		
Area - Ft ²		
Max. Cross-sectional (I.D.)	113.553	0.102
Gimbal Origin:		
Left Nozzle		
X _o Y _o Z _o	1902.6 250.50 400.0	57.078 - 7.515 12.00
Right Nozzle		
X _o Y _o Z _o	1902.6 250.50 400.0	
Null Position: (Deg.)		
Left nozzle gimbal	<u>+</u> 8	<u>+</u> 8
Right nozzle gimbal	<u>+</u> 8	<u>+</u> 8

ONENT: ET PROTUBERANCE - PT12

d head DESCRIPTION: Lightning rod attached to ET nose.

MODEL SCALE: 0.030

DIMENSIONS:

Length

Diameter - In.

FULL SCALE	MODEL SCALE
30.90	0.927
3.20	0.004

MODEL COMPONENT: ELECTR	ICAL LINE -	PT ₂₂	
GENERAL DESCRIPTION: Left	-hand electr	ical conduit line	on T ₂₈ .
MODEL SCALE: 0.030.			
DRAWING NUMBER	/L78-00063,	-00062B	
DIMENSION:		FULL SCALE	MODEL SCAL
Leading edge at:	$\mathbf{x_T}$	1084.333	32,530
	$\mathbf{Y}_{\mathbf{T}}$	- 99.591	2.988
	Z	-139.620	- 4.189
Trailing edge at:	$\mathbf{x_T}$	_2058_000_	61.740
	$\mathbf{Y_{T}}$	- 99.591	- 2.988
	$z_{ m T}$	- 139.620	- 4.189
Conduit size:	1	2.0 x 6.0	0.06×0.18
enterline of line located radi	ally at Ø =	35.5 deg	

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: LO2 RECIRCULATION LINE - PT23

GENERAL DESCRIPTION: LO2 recirculation line on right-hand upper side

side of T28.

MODEL SCALE: 0.030

DRAWING NO.: VL78-000063, -000062B, Martin Marietta 82600207000

DIMENSIONS:		FULL SCALE	MODEL SCALE
Leading edge at:	$\mathbf{x_T}$	1040.667	31.220
	$\mathbf{Y_T}$	94.169	2.825
	$\mathbf{z_r}$	540.934	16.228
Trailing edge at:	$\mathbf{x_T}$	2062.920	61.888
	Y _T .	70,000	2.100
	$\mathbf{z_{T}}$	573.934	17.218
Diameter of line		4.0	0.120

Centerline of line located radially at $\emptyset = 33^{\circ}45^{\circ}$ (Right of TDC looking forward)

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPCNENT: LH2 RECIRCULATION LINE - PT24

GENERAL DESCRIPTION: LH2 recirculation line on T28.

MODEL SCALE: 0.030

DRAWING NO.: VL78-000063, -000062B, Martin Marietta 82600207000

DIMENSIONS:		FULL SCALE	MODEL SCALE
Leading edge at:	$\mathbf{x_T}$	1040.667	31.220
	$\mathbf{Y_{T}}$	- 94.169	- 2.825
	$z_{\mathbf{T}}$	540.934	16.228
Trailing edge at:	XT	2062.920	61.888
	YŢ	- 70.00	-2.100
	$\mathbf{z_T}$	573.934	17.218
Diameter of line		4.00	0.120

Centerline of line located radially at $\emptyset = 33^{\circ}45^{\circ}$ (Left of TDC looking forward)

MODEL COMPONENT: ELECTRICA	L LINE - PT	25	
GENERAL DESCRIPTION: Right-ha	nd aft electric	al conduit line on	T ₂₈ with
LH, pressure sensor line an	d LOX vent va	lve actuator line.	
MODEL SCALE: 0.030			
DRAWING NO.: VL78-000063, -0	00062B, Mart	in Marietta 82600	207000
DIMENSIONS:		FULL COALE	MODEL CCALE
		FULL SCALE	MODEL SCALE
Leading edge at:	x_T	1084.333	32,530
	Ϋ́T	99.591	2.988
	Z _T	139.620	4.189
Trailing edge at:	x_{T}	2058.000	61.74
	YT	99.591	2.988
	z _T	139.620	4.189
Line diameter		2.0×6.0	0.06 x 0.18
Centerline of line located radial	ly at 0= 35.5	0	

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: LO2 PRESSURE LINE - PT26

GENERAL DESCRIPTION: LO_2 pressure line on T_{28} .

MODEL SCALE: 0.030

DRAWING NO.: VL78-000063, -000062B, Martin Marietta 82600207000

DIMENSIONS:		FULL SCALE	MODEL SCALE
Leading edge at:	$x_{\mathbf{T}}$	360.733	10.822
	$\mathbf{Y_T}$	15.145	0.454
	z_{T}	407.718	12.232
Trailing edge at:	$\mathbf{x_{T}}$	2083.5	62.505
•	$Y_{\overline{\mathbf{T}}}$	63.25	1.898
	z_{T}	609.00	18.27
Centerline of line located rac	iially at $\emptyset = 2$	7°	
Line diameter		2.0	0.060

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: ELECTRICAL LINE - PT27

CENERAL DESCRIPTION: Electrical conduit on the right-hand forward

section of T28.

MODEL SCALE: 0.030

DRAWING NO.: VL78-00062B

DIMENSIONS:		FULL SCALE	MODEL COALS
Leading adge at:	X _T	360.733	MODEL SCALE
	YT	11.549	0.346
	$\mathbf{z_T}$	412.474	12.374
Trailing edge at:	$\mathbf{x_T}$	876.273	26.288
	YŢ	226.114	6.783
·	$\mathbf{z_T}$	646.774	19.403

Centerline of conduit located radially at $\emptyset = 47.5^{\circ}$

MODEL COMPONENT: RUDDER - R5		
GENERAL DESCRIPTION: Configuration 140C ort	oiter rudder (Ide	entical to
MODEL SCALE: 0.030		
DRAWING NUMBER: VI.70-000146B000	095	
DIMENSIONS:	FULL-SCALE	MODEL SCALE
Area - Ft ²	100.15	0.090
Span (equivalent), In.	201.0	6.03
Inb'd equivalent chord, In.	91.585	2.748
Outb'd equivalent chord, In.	50.833	1.525
Ratic movable surface chord/ to:al surface chord		
At Inb'd equiv. chord	0.400	0.400
At Outb'd equiv. chord	0.400	0.400
Sweep Back Angles, degrees	•	
Leading Edge	34.83	3/4_83
Trailing Edge	26.25	26.25
Hingeline (Product of orce % -)	34.83	34.83
(Product of area & c) Area Moment (Normadocochingeodine), Ft3	610.92	0,016
Mean Aerodynamic Chord, In.	73.2	2.196

MODEL COMPONENT: BOOSTER SOLID ROCK	TET MOTOR - S21	
GENERAL DESCRIPTION:		
MODEL SCALE: 0.030 .		
DRAWING NUMBER VL72-000143D, VL77-C	000066	
DIMENSION:	FULL SCALE	MODEL SCALE
Length (Includes nozzle), In.	1789.40	53.682
Maxweth Tank Diameter, In.	146.00	4.38
Ameno Depth Aft shroud Dia., In.	192.00	5.76
Fineness Ratio	9.3198	9.3198
Area - Ft ²		
Max Cross-Sectional	201.062	0.1809
Planform	•	
Wetted		
Base		
WP of BSRM centerline ($Z_{ m T}$)	400.0	1.200
FS of BSRM nose (X _T)	743.0	22.29
BP of BSRM centerline ($Y_{ m T}$)	250.5	7.515

MODEL COMPONENT: EXTERNAL TANK	K - T ₂₆	
GENERAL DESCRIPTION: NOTE: (Dimensions are to tank struct	tural OMI., TPS not incl	uded_)
MODEL SCALE: 0.030		
DRAWING NUMBER VL72-C	000143D, VL78-000063	
DIMENSION:	FULL SCALE	MODEL SCALE
Length , In.	1844.275	55_328
Max With Dia., In.	331.00	9.93
Max Depth		
Fineness Ratio	5.687	5.687
Area - Ft ²		
Max Cross-Sectional	594.678	0.053
Planform ·		
Wetted		
Base		

MODEL COMPONENT: VERTICAL - V 8		•
GENERAL DESCRIPTION: Configuration 1400 orbit	er vertical tat	U (identical
to configuration 140A /B vertical tail)		
MODEL SCALE: 0.030		
DRAWING NUMBER: VL70-000140C, -000146B		
DIMENSIONS:	FULL SCALE	MODEL SCALE
TOTAL DATA		
Area (Theo) - Ft ² Planform Span (Theo) - In. Aspect Ratio Rate of Taper Taper Ratio Sweep-Back Angles, Degrees. Leading Edge Trailing Edge O.25 Element Line Chords: Root (Theo) WP Tip (Theo) WP	413.253 315.72 1.675 0.507 0.404 45.000 26.25 41.13	0.372 9.472 1.675 0.507 0.404 45.000 26.25 41.13
MAC Fus. Sta. of .25 MAC W.P. of .25 MAC B.L. of .25 MAC	199.81 1463.35 635.52 0.00	43.901 19.066 0.00
Airfoil Section Leading Wedge Angle - Deg. Trailing Wedge Angle - Deg. Leading Edge Radius	10.00 14.92 2.00	10.00 14.92 0.060
Void Area	13.17	0.0019
Blanketed Area	0.0	0.0

TABLE III MODEL DIMENDIONA	I, DATA - Conclude	d.
MODEL COMPONENT: WING-W 116		
General DESCRIPTION: Configuration 4		
MATT: Identical to Many except airfeil thi	ckness. Dibedral	angle is along
trailing odge of wing.		
MODEL SCALE: 0.030		***************************************
TEST YO.	חשב אם עוב	70-000140A, -0002
DIMENSIONS:		
JIPENS IONS.	FULL-SCALE	MODEL SCALE
TOTAL DATA Area (Meo.) Ft ²		
Planform Span (Theo In.	<u> 2690.00</u>	2.421
Aspect Ratio	936.60	<u> 28.10</u>
Rate of Taper	2.245	2.255
Taper Ratio	1.177	1.177
Dihedral Angle, degrees	<u> </u>	<u>0.200</u> 3.500
Incidence Angle, degrees	0.500	0.500
Aerodynamic Twist, degrees	3.000	3.000
Sweep Back Angles, degrees		
Leading Edge	45.000	45.000
Trailing Edge	- 10.056	- 10.056
0.25 Element Line	35.209	35.209
Chords:		
Root (Theo) B.P.O.O.	689.21	20.677
Tip, (Theo) B.P.	137.85	4.136
MAC Fig. Sta. of 25 MAC	1.74.81	14.241
Fus. Sta. of .25 MAC W.P. of .25 MAC	11.36.83	34.105
R I of 25 MAC	290.58 182.13	8.717 5.464
EVACCED DITA	104.1)	.7.404
Area (Theo) Ft ²	1001 50	3 cm/
Span, (Theo) In. BP108	1751.50	1.576 21.620
Aspect Ratio	720.68 2.059	<u>21.620</u> 2.059
Taper Ratio	0.245	0.245
Chords		<u>\(\frac{\cup_{\cip}}\cup_{\cipy}}\cipp_{\cipy}}\cup_{\cipy}}\cup_{\cipy}}\cup_{\cipy}}\cipy}\cip}\cip}\cip}\cip\cip}\cip}\cip\cip}\cip}</u>
Root BP108	562.09	16.863
Tip 1.00 <u>b</u>	137.85	4.136
MAC Z	392.83	11.785
Fus. Sta. of .25 MAC	1185.98	35.579
W.P. of .25 MAC	294.30	8.200
B.L. of .25 MAC	251.77	7.553
Airfoil Section (Rockwell Mod NASA)		
XXXX-64		
Root b =	0.113	.0.113
74.		
Tip b =	0.120	<u> </u>
12+2 for (1) of (2) sides		
Data for (1) of (2) Sides Leading Edge Cuff Planform Area St2		
Planform Area 5t2	113.13	0.102
Leading Edge Intersects Fus M. L. @ Sta	500.0	15.00
Leading Edge Intersects Wing @ Sta	1024.00	30.72

TABLE IV. ORBITER WING PRESSURE TAP NUMBERS

ORBITER WING PRESSURE TAP NUMBERS	
n Y. ORBITER LEFT WING PRESSURE TAP NUMBERS	THE TAPS
No C .041 .113 . 147 . 1-11 . 547 . 638 . 727 . 1793	
23 110 TOT 208 207 26 211 212 213 214 215 216	9 9
867	C
YC O .010.020 650 1014 .229 .362 .497, 700 .931 .965 .540 .5165	
and the second contract of the second contrac	13 34
6T - 230 231 232 234 235 234 235 236 237 239 241	12
70 0 .010 .020 .010 .056 .163 .746 .340 .631 .745 .539 .571 .514 .555	,
14 170 TEP 242 243 244 245 246 247 248 241 250 251 252 253 254 255	14 61
0x7 - 256 257,258 259 260 261 262 263 264 265 266 267 268	13 -
3/C 0 .020 .040 .0513 .171 .2N .102 . 105 .105 .155 .155 .155 .155 .165 .165	
12 200 11 304 270 271 272 273 274 275 270 277 278 279 280 281 282 -	14 39
7 BYT - 283,284 285 286 287 288 289 250 XII 212,293 294 295 XL	14
W a cur are are are and that see 200 200 200 (400 400)	
534 250 Ter 217 298 241 300 xr 302 303 344 305 306 207 308 309 310	14 116
	<u> 13</u>
12 7 - 311 312 313 314 315 316 317 315 314 320 321 322 323	,,
	2 102
Cy, 3CC 127 333 1394 335 -	.3 123
BOT 344 345 346 347	7
16 0 00 000 000 000 150 150 150 150 150	
13 315 TEP 324 315 316 317 318 319 310 31 312	9 140
BOT - 334 351 338 337 340 341 342 343	3
76 0 100 1020 1050 150 150 150 150 150 150	·
130 349 349 350 351 352 353 35√355 35C 357	10 159
Bit - 358 359 360 361 362 363 304 305 366	9
1/c 0 1010 .026 1050 150 .150 .100 1,000 1,000 1,000	· .
85, 45 DP 367 368 369 970 311 312 373 374 375 376 -	10.171
BUT - 317) 318 314 380 381 382 383 334 355 386	10
No 10 1015 119 1157 2155 1157 2157	
192 175 700 387 385 387 390 391 392 393 394	8 194
BOT - 3451 316 397 398 399 400 401	7
E X 13/2 1405	
1 270 43 43	2 196
D ₹ 10° 403,	
1907	
ORBITER RIGHT WING PRESSURE TAP NUMBERS	
OKBITEK KIGHT WING TRESJUKE THE HOMOTHS	NK
<u>η κ</u>	TNP3 1745
₹ C .041 .113 .417 .425 .547 .636 .727 .793	0 45
1235 110 TOP 404 405 406 407 405 409 410 411 412	9 265
GeT	0 .
1/c 0 2010 1020 040 105 116 3 . 246 . 350 . 637 . 793	
134 170 TOF 413 414 415 416 - 417 418 419 420 421	9 222
PET - 422, 423 424 425 426 427 428 - 42)	\$
The second is a second	

NUMBERS . ¥ PRESSURE FUSELAGE

TABLE Y. ORBITER

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1480 44 4C 1530 45.3;

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158 159 160

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8 103 112 121

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725 880 086 1080

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TABLE VI. ORBITER VERTICAL TAIL PRESSURE TAP NUMBERS (LEFT SIDE ONLY)

	TAPS	∞	17	2 6	35	4
	No. TAPS T	80	9 1	6	9	9 4
	06		446	455	464	473
	685 775	437	445	454	463	472
Ņ	685	436	444	453	462	471
X/CV	. 52	435	443	452	461	410
	30	434	442	451	460	469
	15	433	441	450	459	468
	.05	432	440	449	458	467
	.025	431	439	448	457	466
	0	430	438	447	456	465
	۸μ	.153	.316	009.	.840	.925
VERTICAL	Zo MODEL SCALE	16.5	18.0	20.7	22.95	23.76
	ŀ	550	009	069	765	792

TABLE VII. EXTERNAL TANK PRESSURE TAP NUMBERS

(,)

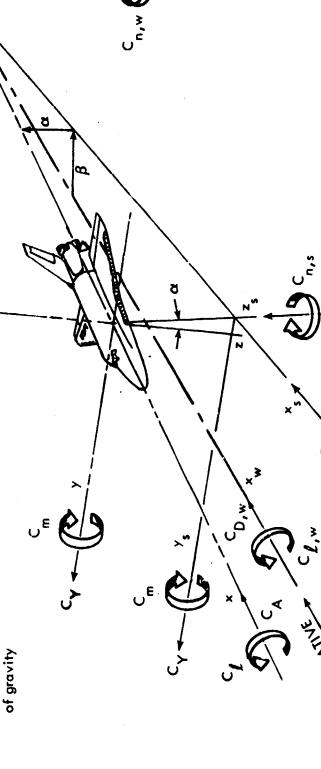
	\$	N. N.		1	·†·-	十	9/	1	3/	┼-	1	-	1/2	12	1/2	1/2	2	; 2	12	12	12	.2	19	1
		200		136	<u> </u>)	534	550	566	3	965	614	630	38	!	829	694	2/10	726	742	756	1/2	
		\$ 5		485	8	, i) i	533	549	585	se	597	6/3	629	645	199	677	693	80%	225	N	757	773	-
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		2/3		485	167	5/3	520		245	18	577	593	8	ess	149	657	673	689	705	/2/	737	23	69	_
		26/			R V	2/2	523	1	4	000	576	265	3	629	3	30	-+		704	- [+	3	_
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	8		478	5	? i	300	522	538	554	575	133	209	8/9	634	000	666	183	860	2/2	1 4	17/2	12/2	╀	_
	8	L	477	43			07/	537	553	583	565	100	613	633	629	27.5	\$	697	7,3	22	745	192	 -	_
	. 05		476	438	3	3 3	370	536	552	568	235	cop	9/9	525	37	11/3	189	0,50	7/2	728	+-	╁-	┪—	
	0	474	475	4.87	3	3	(1)	535	155	567	523	800	6/5	63/	647	$\overline{}$	-	569	11/2	1	╄	 	7.75	-
Xr/	17	0	2622	2912.2	5.0600	1000	2700	C.129.	0194	2 2106	5.2323	26520	0 282/	0 3362	_	5,4045	C 4957 6	C. 5528 6	┺-	-	2 8506	-	0 9838	_
K 72.12	Scale	156/181.9	16.38	65.01	6.3	13.11	+	1104	20.64 0	2154	22.74	2424 0	25.50	28.50 0	31.50 0	34.50 0	37.50 0	2000	4500 0	51.00 C.	5700 5	6/20 0.9264	66.38 0	
Kr = 14. Krusa.		ov.	3	363	403	678	+	200	5 839	7.6 2	758 2	2 500	550 2	380 2	1050 3	1/50 3.	1250 3	1350 40	1500.	150021	1900 5%	2040 61	2146 64	

£ Taps

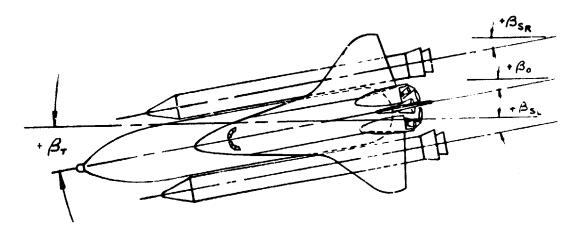
TABLE VIII LEFT SRB PRESSURE TAD NUMBERS

1/4	X 2.	1. K3~ 10.	 		_			BUB	~ DEGREES	3			ŀ	
Loc 6 0 788 79<	Full		Ja.	0	45	8	/35	180	225	270	3/2	75	 	2 ND 74PS
400 78 79 70	202	_	0	788								`		`
470 11.1 0.0950 797 780 680	13	-	0.0335	189	260	161	262	793	794	738	962	80		6
450	37.6	-	0.0950	197	798	662	800	100	208	883	834	Ø		//
450 135 645 677 619 679 620 620 68 670 619 620 621 622 623 633 634 632 634 632 634 632 634 635 634 635 634 635 634	A		0.1118	Bes	8c6	807	828	833	810	811	2/8	Ø		25
550 (6.5) 0.98e 81/ 622 623 626 627 626 627 629 629 639 639 639 639 639 639 639 634 635 636 637 639	45	-	0.1397	8/3	814	8/5	9/8	817	8/8	80	622	90	~	£3
750 21.0 c.774 67.3 63.4 63.2 63.4 63.5 63.4 63.5 63.4 63.5 <th< th=""><th>55</th><td> </td><td>0.7%</td><td>82/</td><td>223</td><td>823</td><td>824</td><td>828</td><td>928</td><td>827</td><td>828</td><td>00</td><td>~</td><td>A</td></th<>	55	 	0.7%	82/	223	823	824	828	928	827	828	00	~	A
850 25.5 C.5537 634 634 640 641 642 642 642 642 642 642 643 643 644 643 644 644 644 644 644 644 643 645 652	70/	-	£42.0	628	330	83/	258	833	534	835	536	40	~	6\$
1050 31.5 0480 847 849 859 850<	85.	-	C.3632	837	838	839	840	188	842	843	844	O	~	57
1250 3155 05645 853 854 855 856 857 859 859 869	105	-	0.4750	548	848	847	848	823	850	851	258	B	~	65
145.0 43.5 Colores 86.7 26.2 26.2 68.4 86.5 68.6 68.7 68.9 8 150.3 45.03 0.720 86.9 87.1 67.1 67.2 87.2 8 150.5 45.15 0.720 87.3 87.3 87.3 87.3 87.3 8 8 8 8 8 8 4 4 4 4 4 4 4 4 4 4 4 8 8 88.9 88.9 88.9 88.9 88.9 88.9 8	125		0.5867	853	254	855	856	857	858	859	099	e	~	73
156.3 45.09 649 971 672 672 3 150.5 45.15 0.7290 873 874 875 876 876 4 150.5 45.15 0.7290 873 873 878 878 878 4 4 151.7 45.57 0.737 686 887 888 899 894 896 8 <td< th=""><th>145</th><td>-</td><td>0.6985</td><td>861</td><td>292</td><td>863</td><td>884</td><td>865</td><td>886</td><td>198</td><td>898</td><td>8</td><td>2</td><td>ó</td></td<>	145	-	0.6985	861	292	863	884	865	886	198	898	8	2	ó
1505 45.15 0.7290 67.3 874 875 676 4 15.7 45.57 0.7340 873 873 879 479 47 15.7 45.57 0.734 871 883 883 884 87 3 15.7 45.57 0.737 685 885 889 890 891 89 8 16.5 49.5 0.861 695 896 697 87 8 </th <th>150</th> <td>-</td> <td>L</td> <td>698</td> <td></td> <td></td> <td></td> <td>87/</td> <td></td> <td>872</td> <td></td> <td>41)</td> <td>~</td> <td>84</td>	150	-	L	698				87/		872		41)	~	84
15/7 45.5/ c.736/ 877 678 678 678 678 4 15/9 45.57 c.812 68/1 883 883 884 3 1650 49,5 c.812 686 887 889 890 891 89 1750 52.5 c.846/ 693 694 695 896 697 89 89 1832.9 54.73 0.9120 909 900 916	Ļ.			873		874		875		876		4		88
15/9 45.57 0.737 66/1 881 883 883 884 83 1650 49.5 0.815 686 887 889 890 691 692 8 1750 52.5 0.8461 693 694 697 697 697 900 6 1832.9 54.477 0.9120 909 900 917 916 916 916 4 1833.9 55.02 0.7130 913 918 976 920 920 916 4 1872.1 56.17 0.9344 917 918 920 <th>L</th> <td></td> <td></td> <td>877</td> <td></td> <td>878</td> <td></td> <td>879</td> <td></td> <td>880</td> <td></td> <td>4</td> <td></td> <td>35</td>	L			877		878		879		880		4		35
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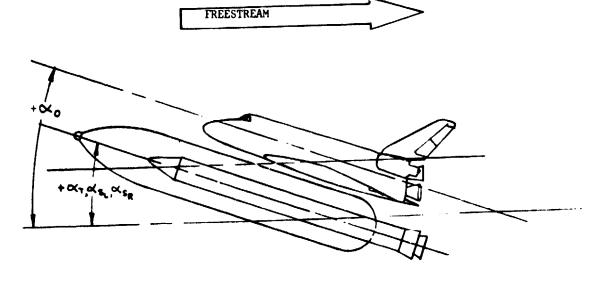
* PRESSURE THPS AT 77.5 ... RADIUS ON THE STRUKTURAL RINGS



a. Forces and Moments Figure 1. - Axis Systems.



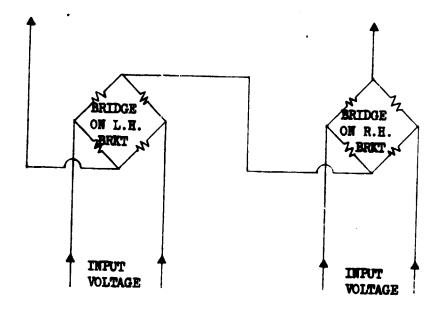
SIDEBLIP ANGLES



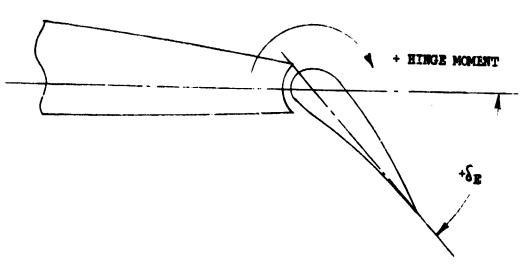
PITCE ANGLES

b. Model Attitude DefinitionFigure 1. - Continued.

OUTPUT VOLTAGE



ELEVON HINGE MOMENT WIRING DIAGRAM
TYPICAL FOR INBOARD AND OUTBOARD ELEVONS



c. Elevon Electrical Hookup and Sign Conventions
 Figure 1. - Concluded.

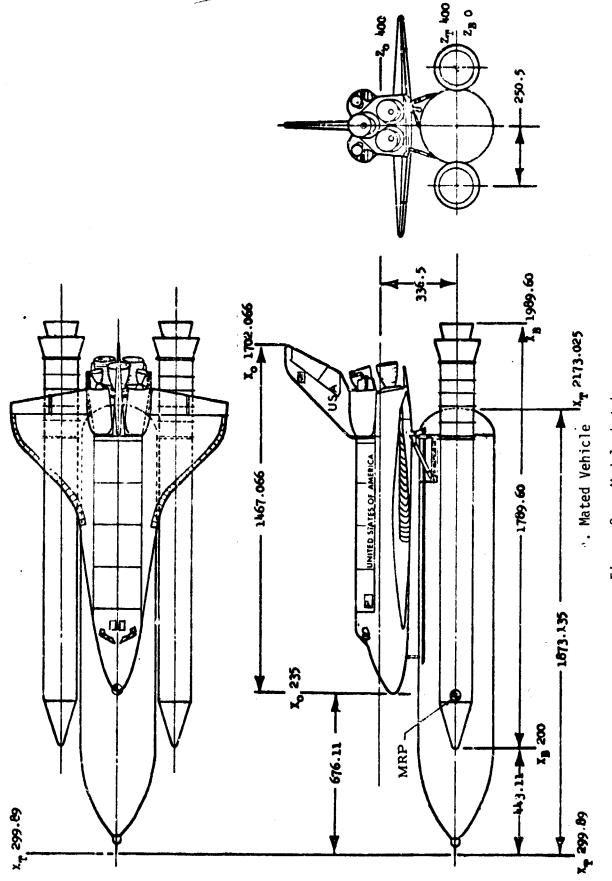
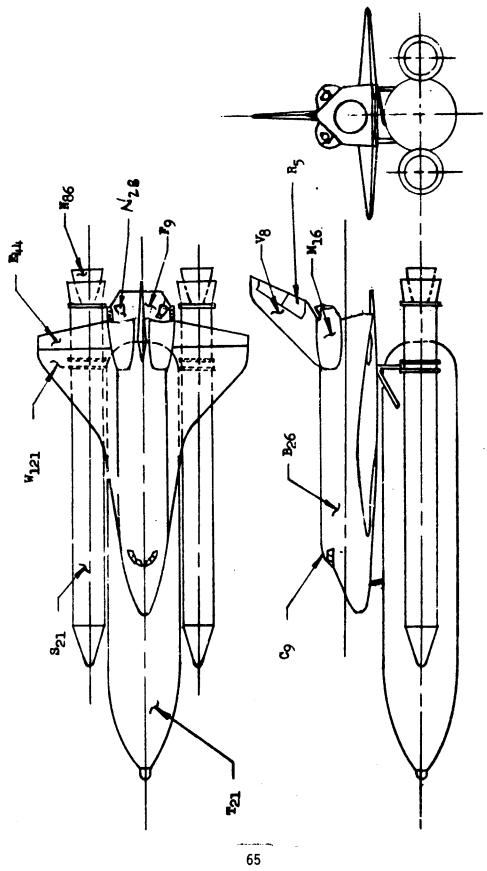
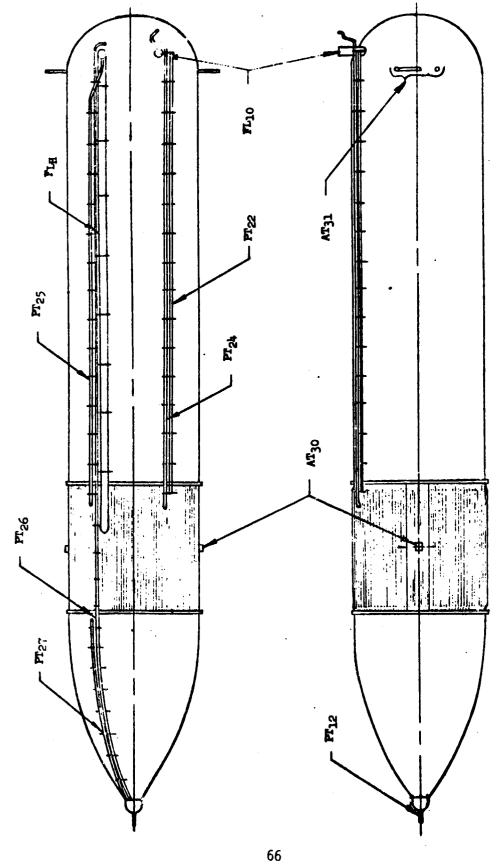


Figure 2. - Model sketches.

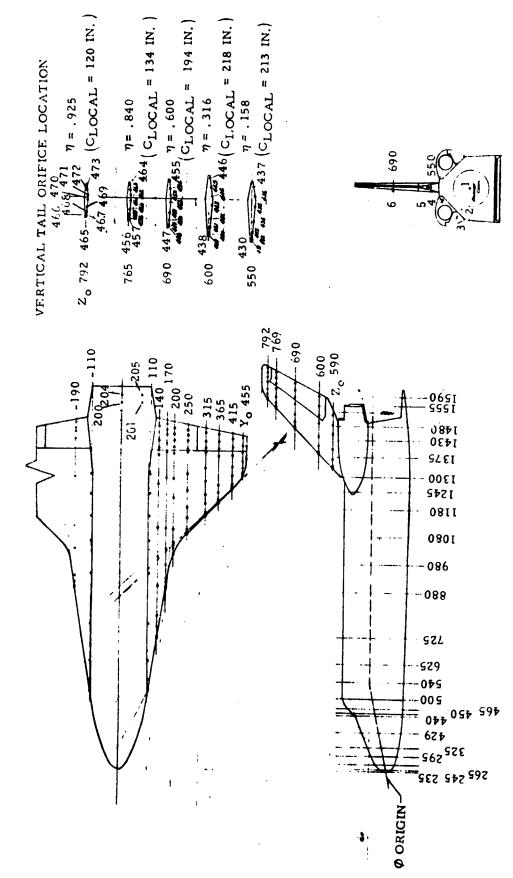


b. LVA Integrated Vehicle Three View Figure 2. - Continued.



c. (T_{28}) External Tank Protuberances

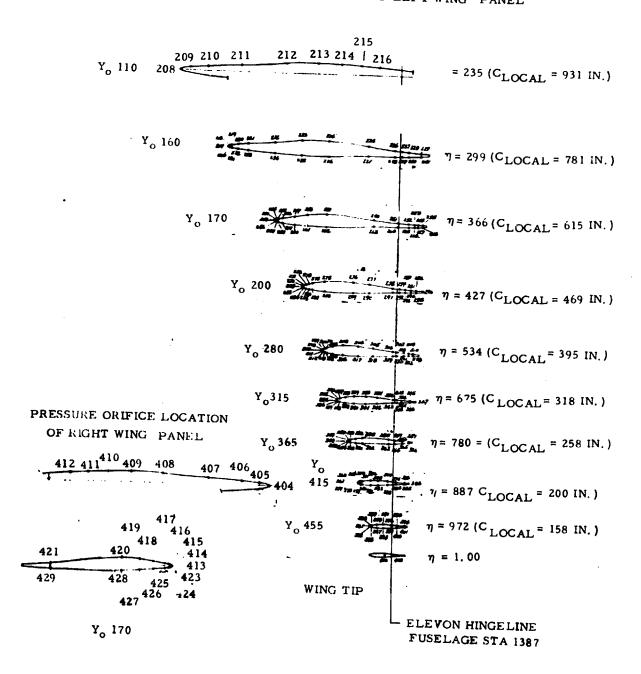
Figure 2. - Continued.



VIEW LOOKING FORWARD ORBITER BASE d. Orbiter Upper Wing and Vertical Tail Pressure Tap Locations

Figure 2. - Continued.

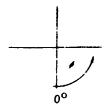
PRESSURE ORIFICE LOCATION OF LEFT WING PANEL



e. Orbiter Wing Pressure Tap LocationsFigure 2. - Continued.

FUSELAGE ORIFICE LOCATION NOTE:

VIEW LOOKING AFT



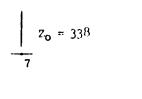
FUS STA 235

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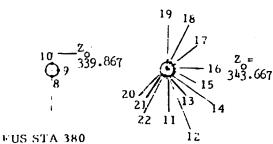
FUS ST/ 245

FUS STA 265

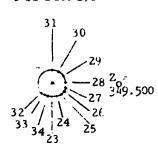
FUS STA 295



FUS STA 325

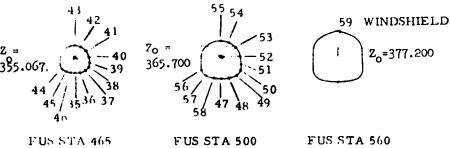


FUS STA 440



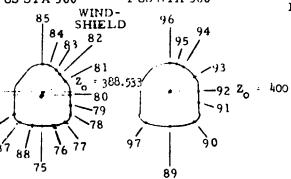
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FUS STA 450

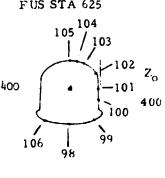


FUS STA 465
WINDSHIELD
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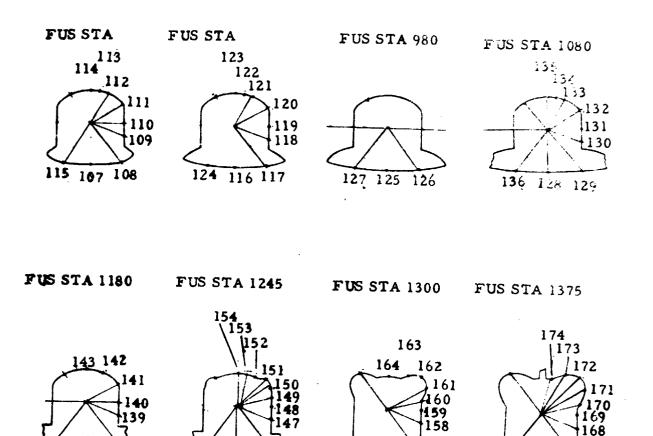


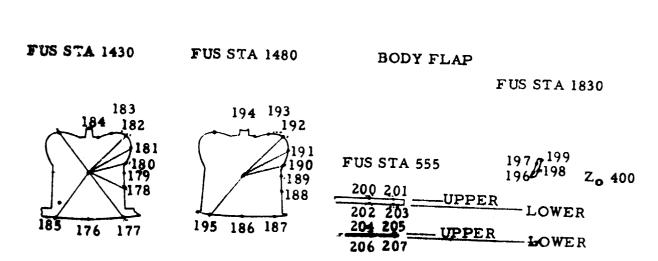
70 / 61 71 72 60 FUS STA 625



f. Orbiter Forward Fuselage Pressure Tap Locations

Figure 2. - Continued.





g. Orbiter Aft Fuselage Pressure Tap Locations
Figure 2. - Continued.

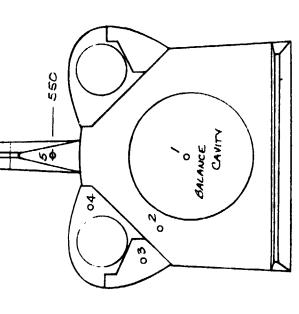
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BODY FLAP PRESSURE TAP NUMBERS

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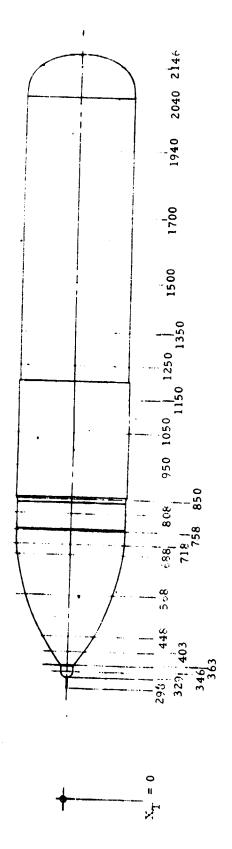
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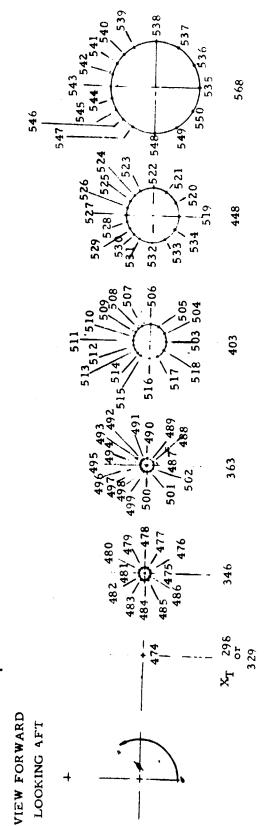


OPBITTER BASE PRESSULE TAPS

h. Orbiter Base Pressure Tap Locations

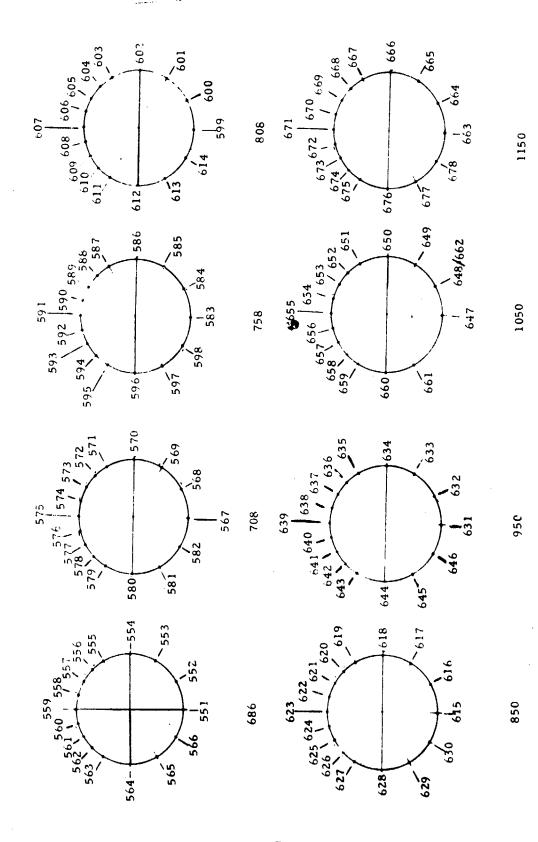
Figure 2. - Continued.





i. External Tank Forward Pressure Tap Locations

Figure 2. - Continued.



j. External Tank Mid Pressure Tap Locations

Figure 2. - Continued.

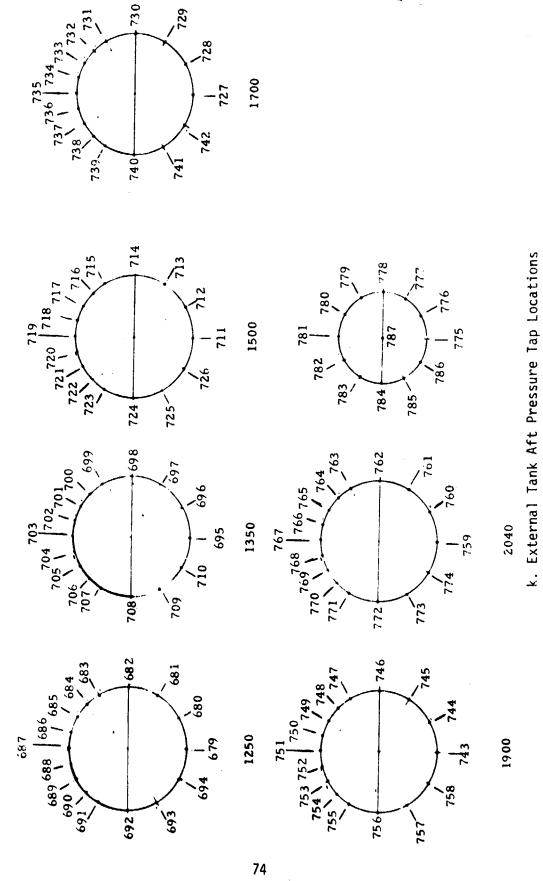
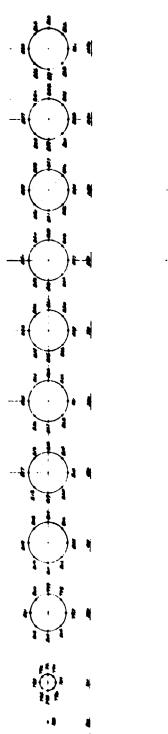
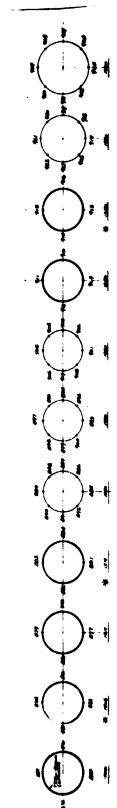
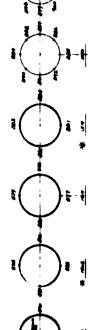
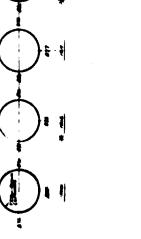


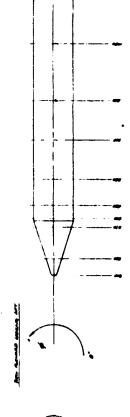
Figure 2. - Continued.





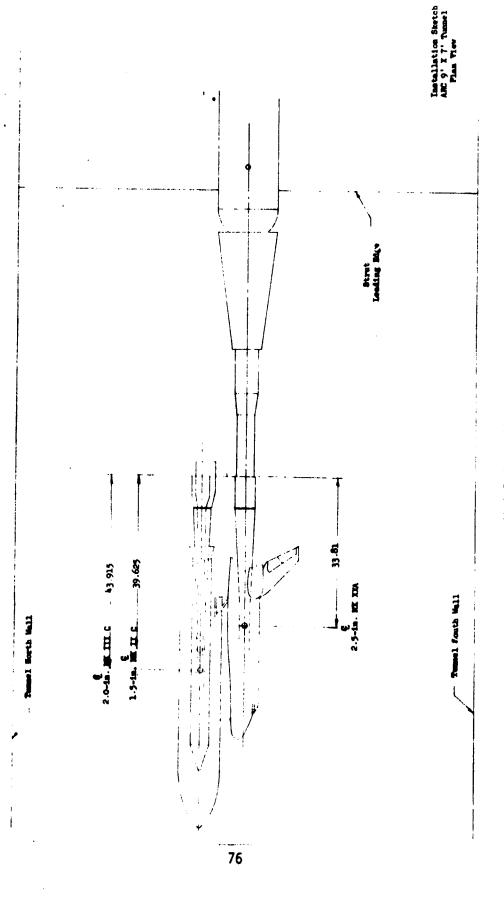






1. SRB Pressure Tap Locations

Figure 2. - Continued.



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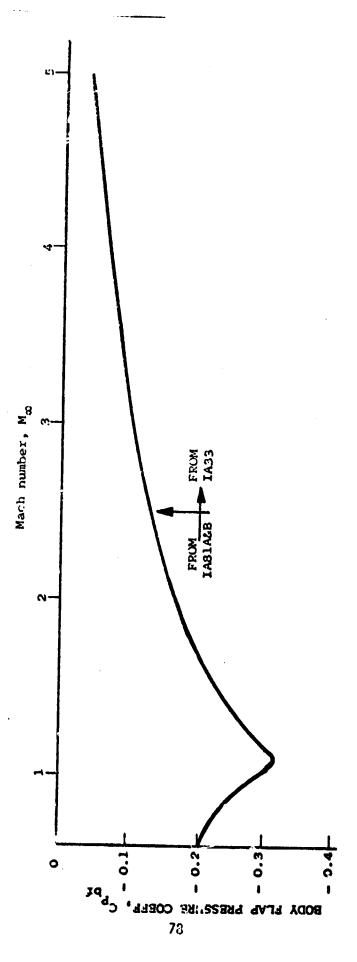
m. Model Installation Side View

Figure 2. - Continued.

Installation Shetch AMC 9' X 7' Tunnel Side Ylew Looking Borth

n. Model Installation Top View

Figure 2. - Continued.

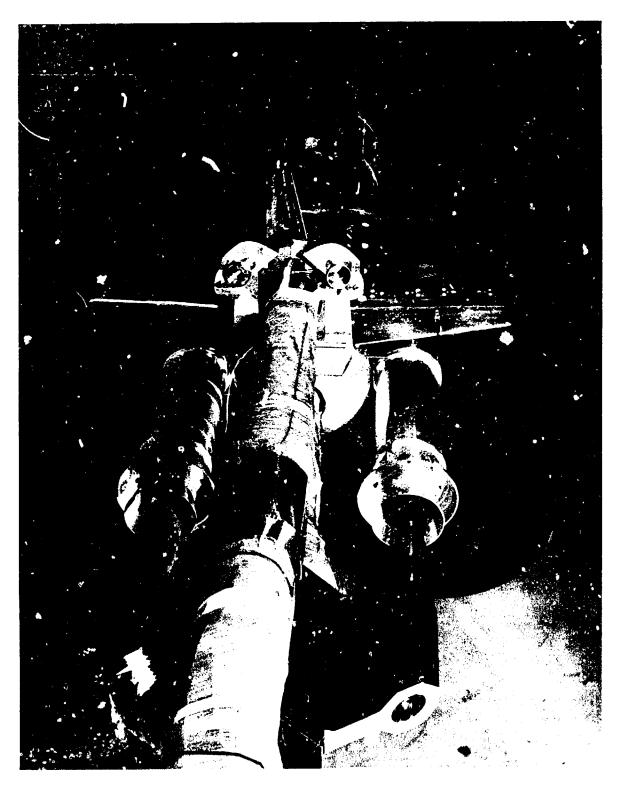


o. Orbiter Body Flap Pressure Coefficients

Figure 2. - Concluded.

a. Side View

Figure 3. - Model photographs.



b. Rear View

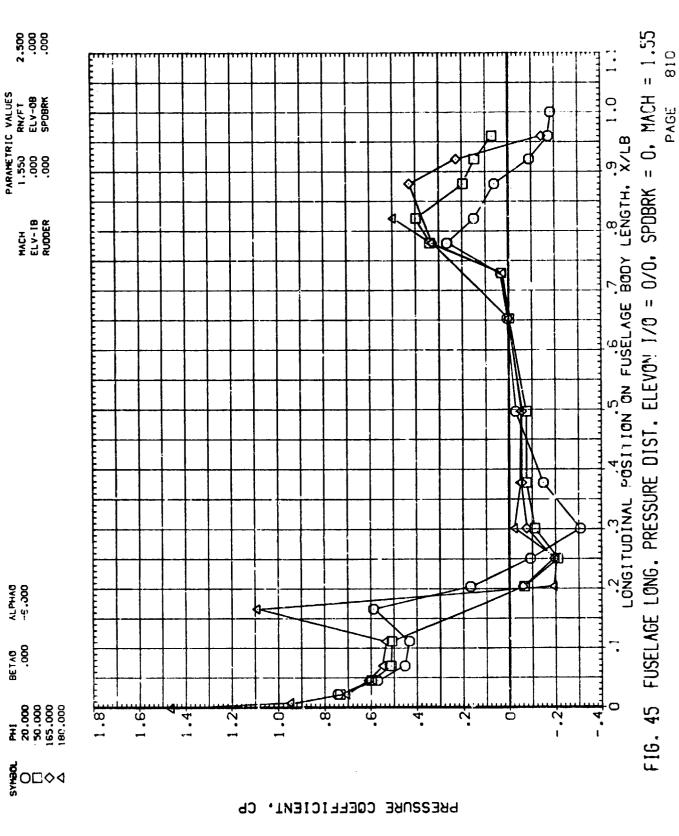
Figure 3. - Concluded.

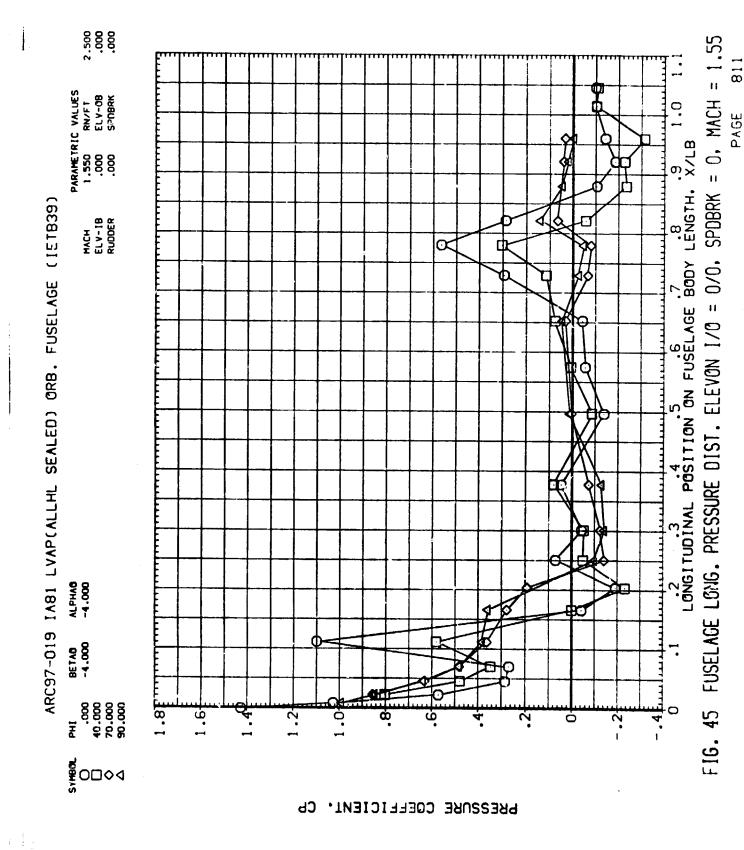
DATA FIGURES

VOLUME 1 Pages 1-808 (Force)

VOLUME 2 Pages 809-1663 (Pressure)

ALPHAG -5.300





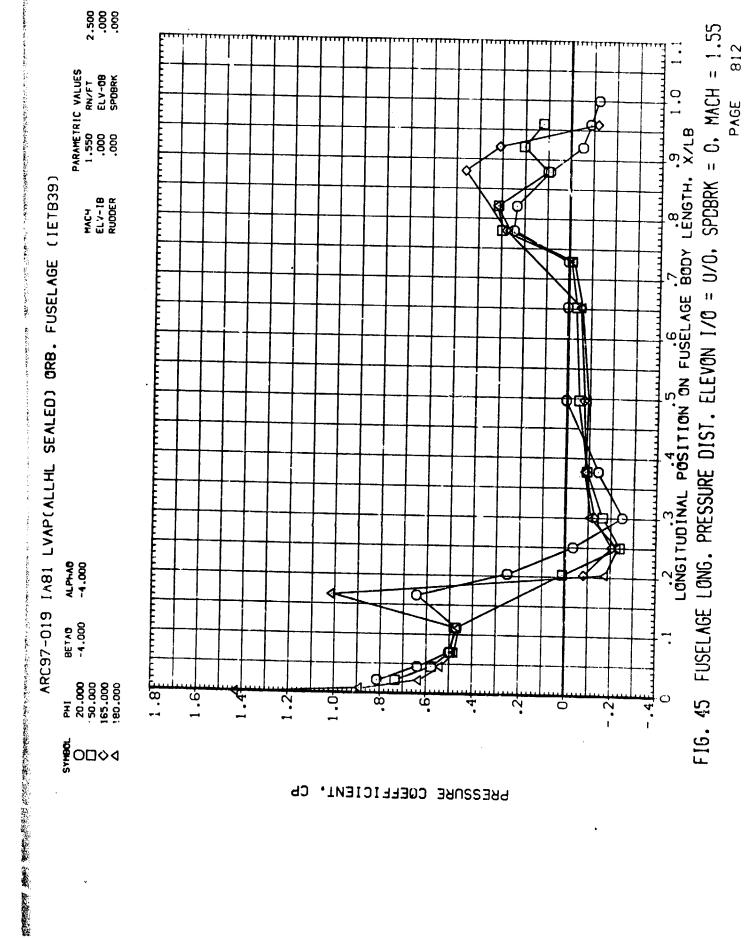
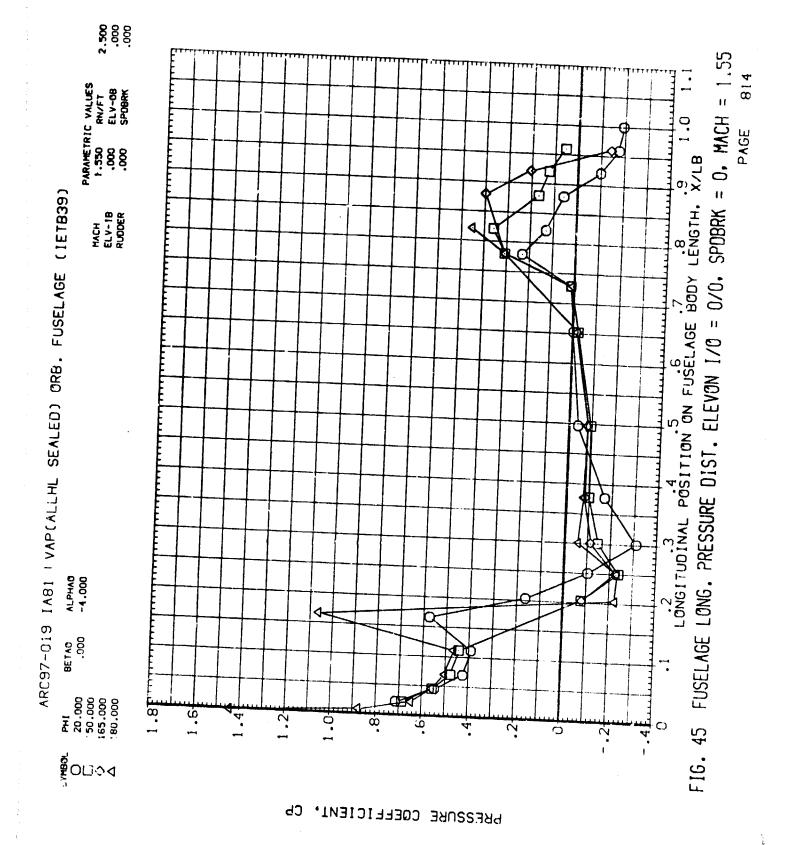
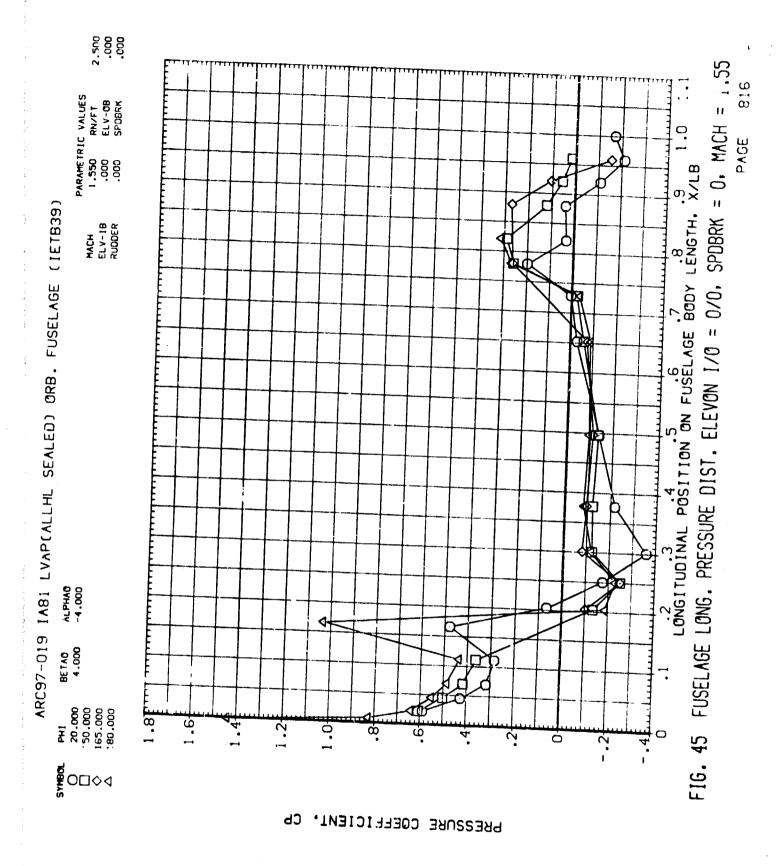


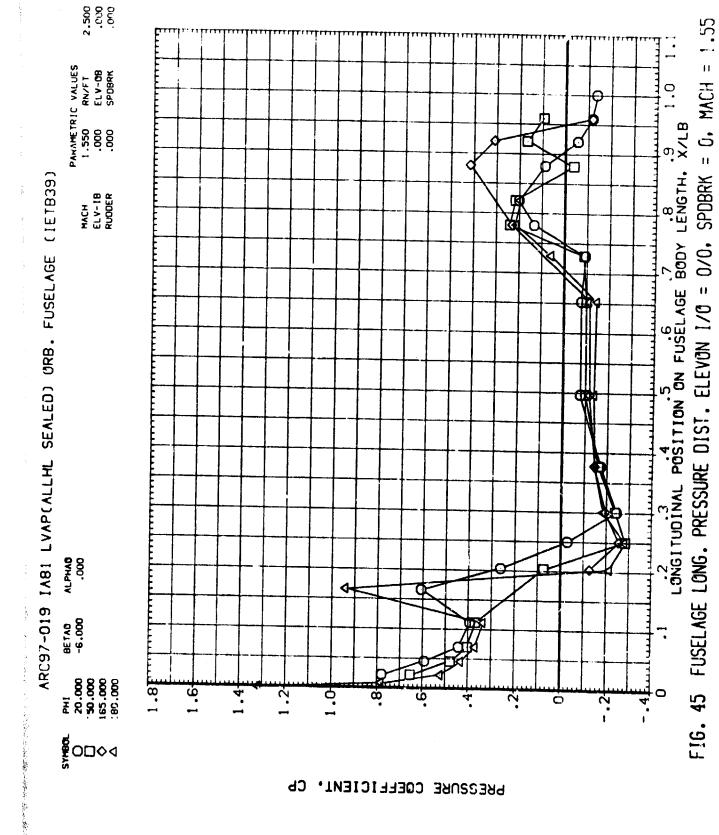
FIG. 45



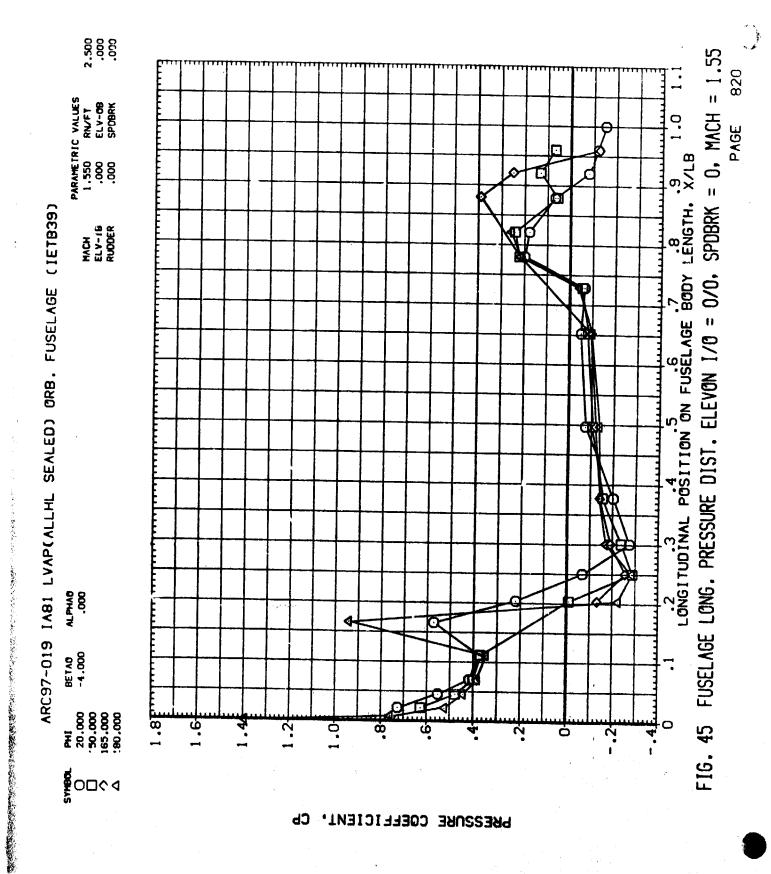
FUSELAGE LONG. PRESSURE DIST. ELEVON I/0 = 0/0, SPDBRK = 0, MACH = 1.55 FIG. 45

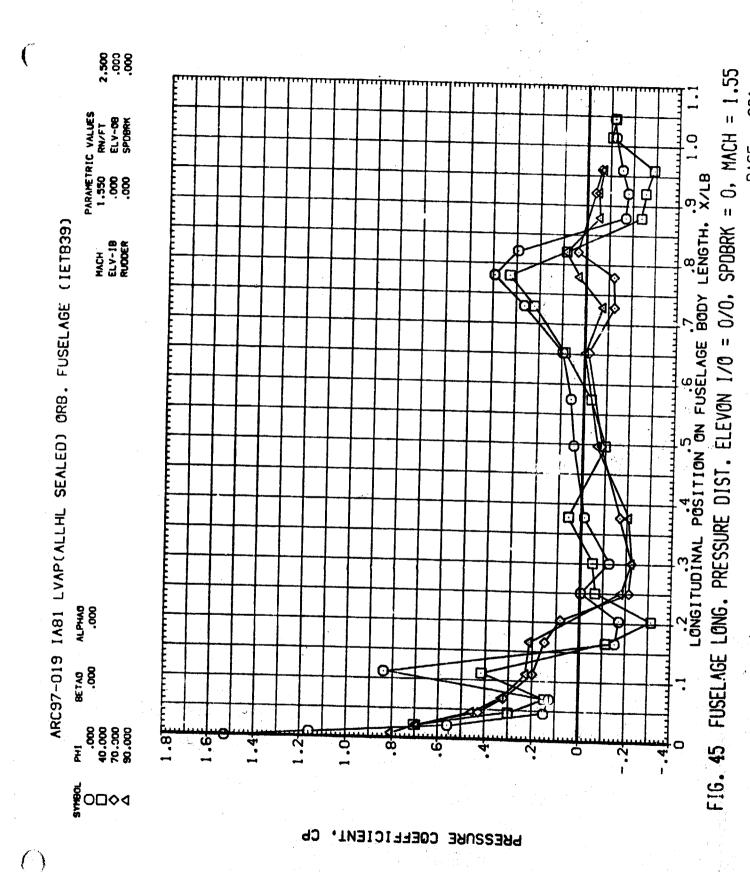
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SPOBRK = 0, MACH = 1.55 PAGE 822

FIG. 45 FUSELAGE LONG. PRESSURE DIST. ELEVON 1/0 = 0/0,

2.500 PARAMETRIC VALUES
1.550 RN/FT
.000 ELV-08
.000 SPDBRK 0. LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH, X/LB ARC97-019 1A81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB39) MACH ELV-18 RUDDER ALPHA0. 8ETA0 4.000 · 1.8F 40.000 70.000 90.000 쓩 1.6 4 9.

PRESSURE COEFFICIENT,

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FIG. 45 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 1.55

PAGE

2.500 .000 .000 PARAMETRIC VALUES
1.550 RN/FT
.000 ELV-08
.000 SPDBRK ARC97-019 IAB1 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB39) MACH ELV-10 RUDDER ALPHAB. 8£140 4.600 741 20.600 30.000 165.000 1.8F 1.6 8 Q. 1 **≨**O□**◊**4 PRESSURE COEFFICIENT.

SPDBRK = 0, MACH = 1.55

0.

LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH. X/LB

FIG. 45 FUSELAGE LONG. PRESSURE DIST. ELEVON 1/0 = 0/0.

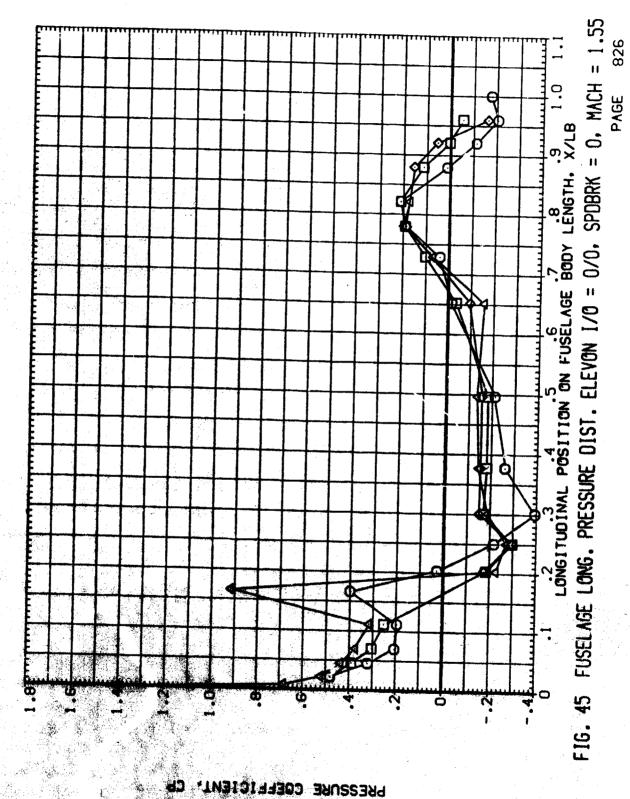
2.500 FIG. 45 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0. SPDBRK = 0. MACH = 1.55 PARAMETRIC VALUES
1.550 RN/FT
.000 ELV-08 .2 .3 .4 .5 .6 .7 .8 .9 LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH. X/LB ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB39) MACH ELV-18 RUDDER ALPHAG .000 BETAB 6.000 .000 40.000 70.000 90.000 **2**0□◊4

PAGE

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1.550 RN/FT .000 ELV-08 ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB39) MACH ELV-18 RUDDER 6.000 [§]O□◊∢

2.500 9.90 9.00 9.00



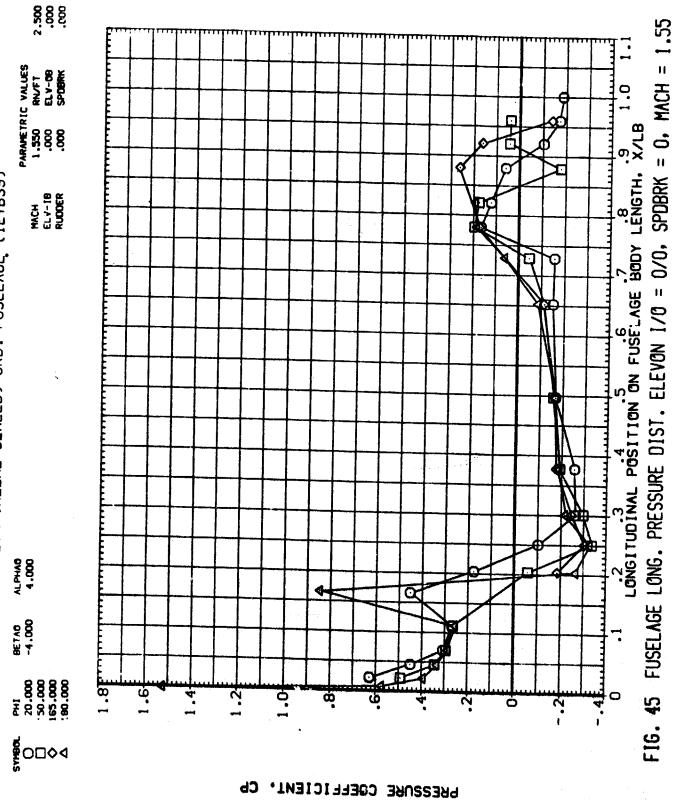
PARAMETRIC VALUES 1.550 RN/FT .000 ELV-08 .000 SPDBRK .2 .3 .4 .5 .6 .7 .8 .9 LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH, X/LB ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB39) MACH ELV-18 RUDDER ALPHAG 4.000 BETAG -4.000 40.000 70.000 90.000 1.8E 9.1 PRESSURE COEFFICIENT,

SPDBRK = 0, MACH = 1.55 PAGE 827

FUSELAGE LONG. PRESSURE DIST. ELEVON 1/0 = 0/0.

2.5 86.9 98.9

IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB39) ARC97-019



2.30 9.90 9.90 9.90 PARAMETRIC VALUES 1.550 RN/FT .000 ELV-08 .000 SPDBRK LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH, X/LB ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB39) MACH ELV-18 RUDGER ALPHA0 4.000 8ETAG .000 .000 40.000 70.000 90.000 1.8E 1.6 **§** ○□ ◊ 4

PRESSURE COEFFICIENT

FIG. 45 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 1.55

2.500 .000 .000 PARMETRIC VALUES
1.550 RN/FT
.000 ELV-08
.000 SPD8RK 1.0 LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH, 3/LB (IETB39) RECT-18 FIG. 45 FUSELAGE LONG. PRESSURE DIST. ELEVON 1/0 = 0/0, ARC97-019 IA81 LVAP(ALLHL SEALED) ORB, FUSELAGE 19 ALPHMB 4.000 BETA6 .000 38 20.000 30.000 163.000 9 0.1 Ø, Q **E**O□04 PRESSURE COEFFICIENT.

SPDBRK = 0. MACH = 1.55

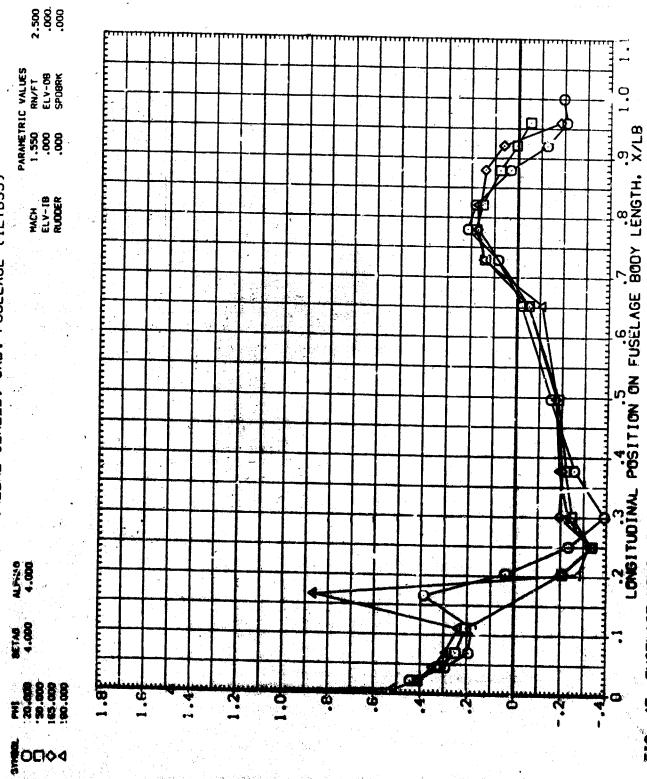
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2.50 96.99 PARAMETRIC VALUES
1.550 RN/FT
.000 ELV-08
.000 SPDBRK .2 .3 .4 .5 .6 .7 .8 .9 LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH. X/LB ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB39) MACH ELV-18 RUDDER 4.000 9£146 4.000 6.00 00.00 00.00 00.00 1.85 **E**O□◊4

FIG. 45 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPOBRK = 0, MACH = 1.55

ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB39) 4.000



SPDBRK = 0, MACH = 1.55 FIG. 45 FUSELAGE LONG. PRESSURE DIST. ELEVON 1/0 = 0/0,

832

2.500 .000 FIG. 45 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPOBRK = 0, MACH = 1.55 PARAMETRIC VALUES
1.550 RN/FT
.000 ELV-08
.000 SP08RK ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB39) MACH ELV-19 RUDDER .000 . 60.00 70.000 90.000 **§**O□**◊**4

PRESSURE COEFFICIENT.

2.500 PARAMETRIC VALUES
1.550 RN/FT
.000 ELV-08 THE PROPERTY OF THE PROPERTY O ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB39) MACH ELV-18 RUDDER 20.000 30.000 65.900 60.000 **E**O□◊4

PRESSURE COEFFICIENT,

FIG. 45 FUSELAGE LONG. PRESSURE DIST. ELEVON 1/0 = 0/0. SPOBRK = 0. MACH = 1.55 LONGITUDÎNAL POSITION ON FUSELAGE BODY LENGTH. X/LB

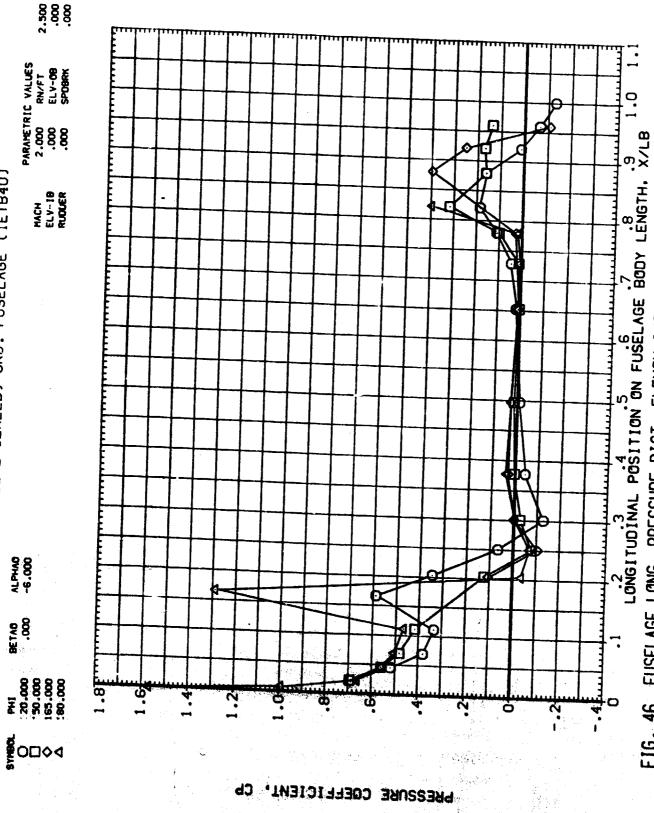
2.00 00.00 00.00 : VALUES RN/FT ELV-08 SPOBRK .2 .3 .4 .5 .6 .7 .8 .9 1.0 LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH, X/LB PARAMETRIC 2.000 R. .000 El ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB40) MACH ELV-18 RUDDER ALPHA0 -6.000 8£TA8 .000 74.000 40.000 70.000 90.000 **ਛੂ** O□◊4

PRESSURE COEFFICIENT

SPDBRK = 0, MACH = 2.00

FIG. 46 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0,

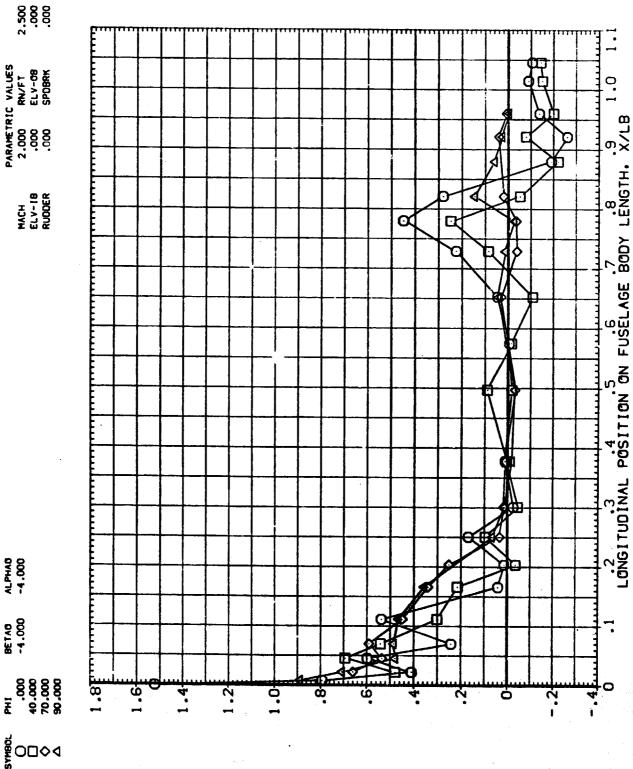
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SPDBRK = 0. MACH = 2.00FIG. 46 FUSELAGE LONG. PRESSURE DIST. ELEVON 1/0 = 0/0.

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ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB40) BETAG -4.000



PRESSURE COEFFICIENT,

FIG. 46 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.00

ARC97-019 IA81 LVAF(ALLHL SEALED) ORB. FUSELAGE (IETB40)

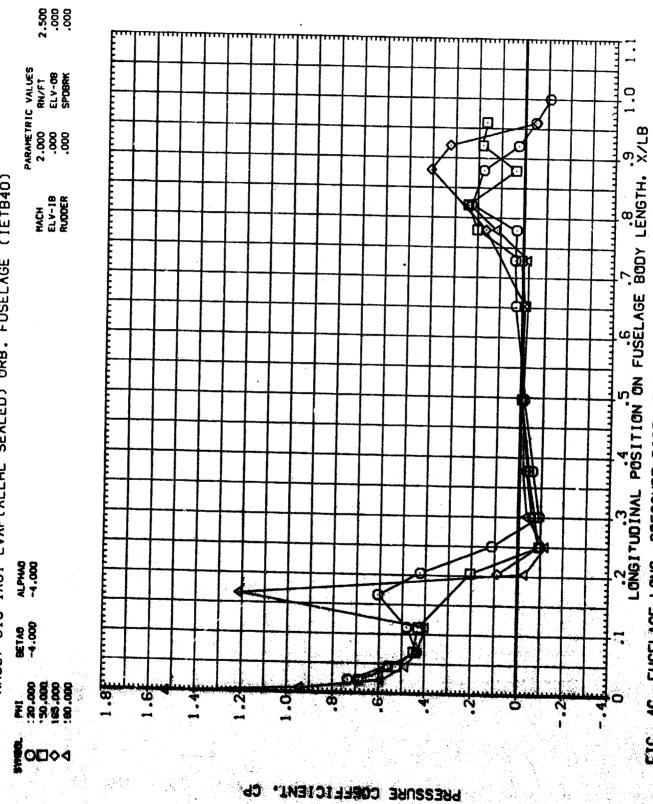
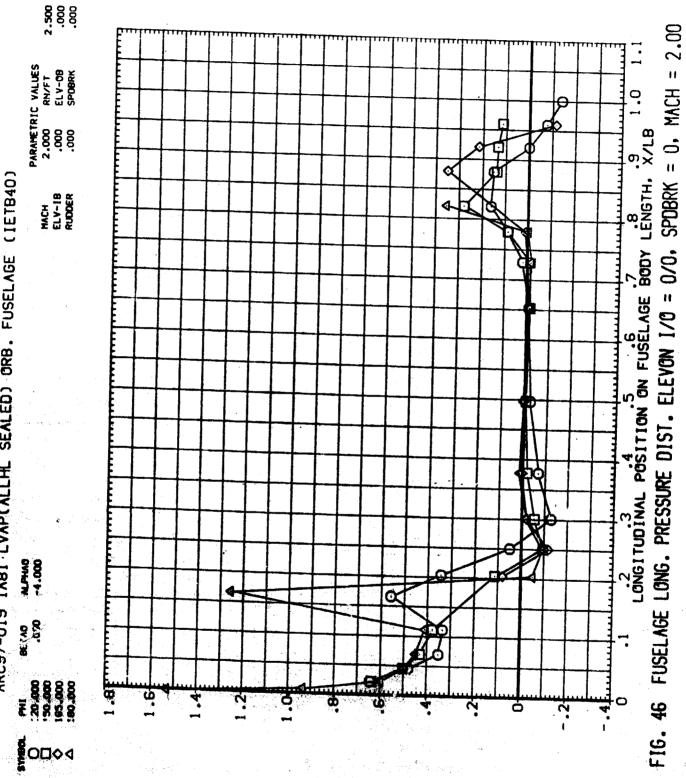


FIG. 46 FUSELAGE LONG. PRESSURE DIST. ELEVON I/C = 0/0, SPOBRK = 0, MACH = 2.00

2.500. 2.000 RN/FT .000 ELV-08 .000 SPOBRK CONGITUDINAL POSITION ON FUSELAGE BODY LENGTH. X/LB ARC97-019 IAB1 LVAPCALLHL SEALED) ORB. FUSELAGE (IETB40) MACH ELV-18 RUDDER A.PHA6 14.05.00 00.00 00.000

FIG. 46 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPOBRK = 0, MACH = 2.00

ARC97-019 1A81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB40)



PRESSURE COEFFICIENT.

PARAMETRIC VALUES 2.000 RN/FT .000 ELV-0B 1.0 .2 .3 .4 .5 .6 .7 .8 .9 LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH. X/LB ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB40) MACH ELV-18 RUDDER ALPHA0 9£140 4.000 1.8FTT .000 70.000 90.710 8 1.6 1.0 -.2 Ò **8 1 1 1 1 1 1 1**

PRESSURE COEFFICIENT.

FIG. 46 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPOBRK = 0, MACH = 2.00

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2.00.00 00.00 00.00 LÖNG. PRESSURE DIST. ELEVON I/O = 0/0, SPUBRK = 0, MACH = 2.00 PAGE PARAMETRIC VALUES 2.000 RN/FT .000 ELV-08 .000 SP09RK ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB40) KACH ELV-19 RUODER ALPHA0 -4.000 8£1A6 4.900 7HI 20.600 165.000 **№**0□◊4

46 FUSELAGE LONG. PRESSURE DIST. ELEVON 1/0 = 0/0,

RESSURE COEFFICIENT,

2.500 PARAMETRIC VALUES
2.000 RN/F1
.000 ELV-08
.000 SPOBRK ARC97-019 IA81 LVAP(ALLHL SEALED) 3RB. FUSELAGE (IETB40) MACH ELV-18 RUDDER AL PHAG. 6.000 -6.000 46.000 20.000 20.000 20.000 **€**0□04

6 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.00 PAGE .2 .3 .4 .5 .6 .7 .8 .9 LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH, X/LB

PARMETRIC VALUES
2.000 RN/FT
.000 ELV-08
.000 SPOSPR AREST-019 IA81 LVAP(ALLH SEALED) ORB. FUSELAGE (PET840) MACH ELV-18 RUDDER

2.50 .000 .000

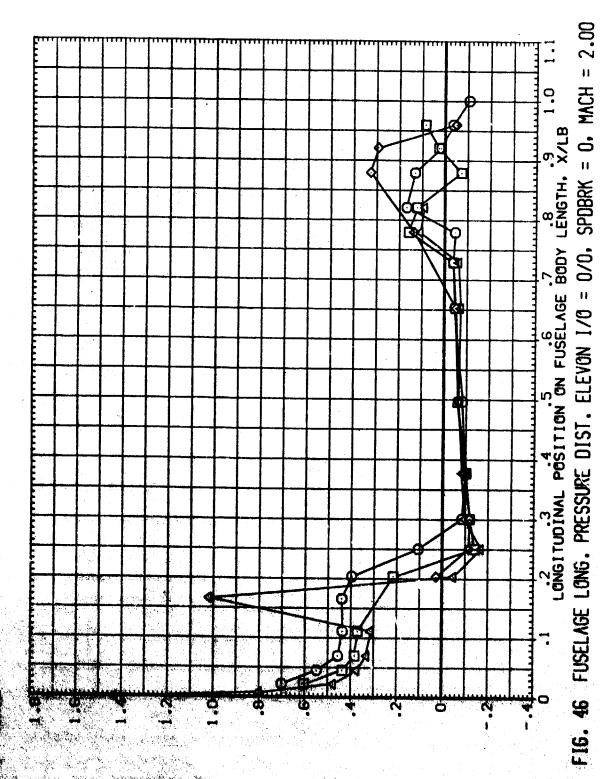
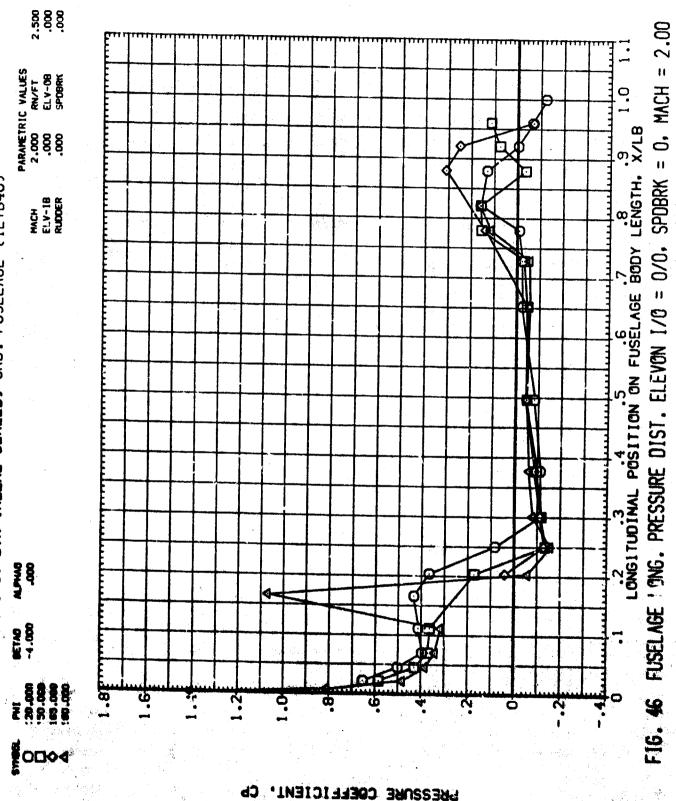


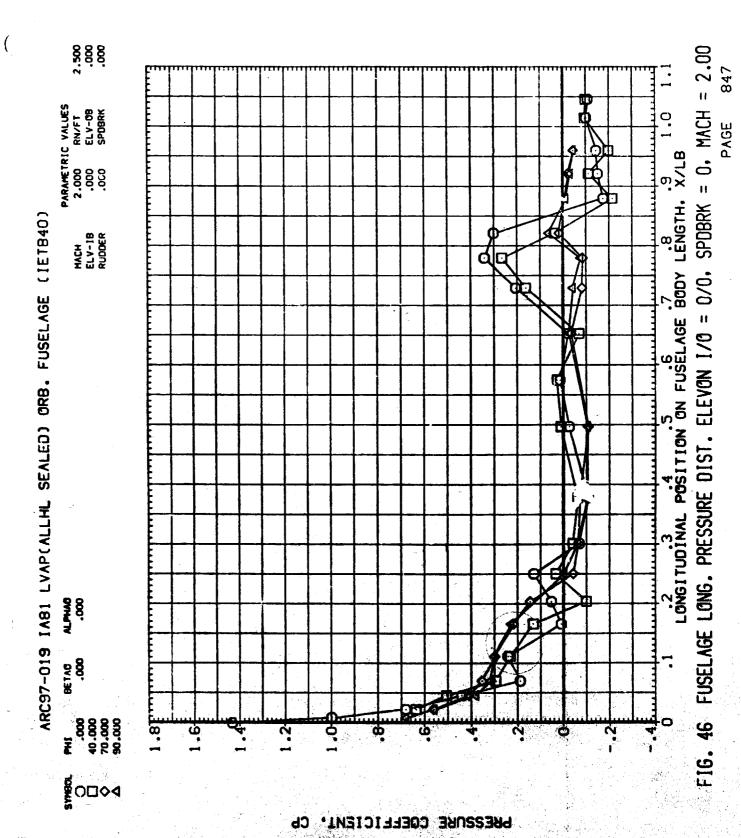
FIG. 46 FUSELAGE LONG. PRESSURE DIST. ELEVON I/0 = 0/0, SPDBRK = 0, MACH = 2.00PARAMETRIC VALUES 2.000 RN/FT .000 ELV-08 ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB40) MACH ELV-18 RUDDER 741 60.000 70.000 70.000

PRESSURE COEFFICIENT, CP

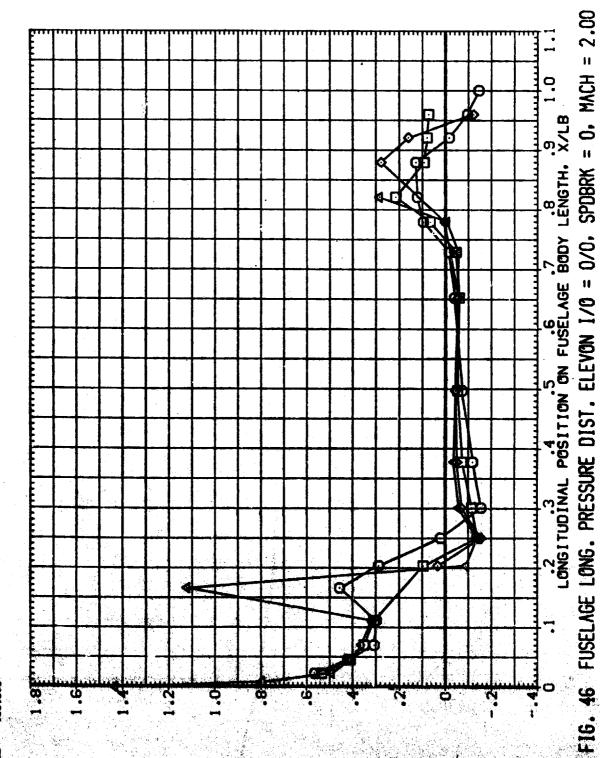
ARC97-019 IA81 LVAP(ALLML SEALED) ORB. FUSELAGE (IETB40)

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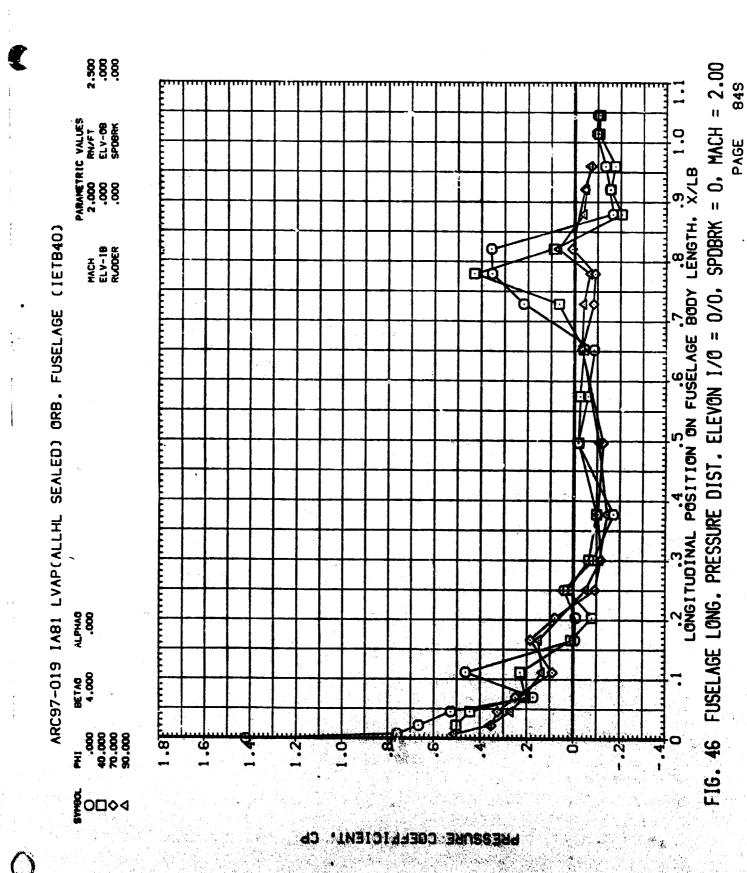




2.5 98.9 98.0 98.0 2.000 RN/FT .000 ELV-08 .000 SP08RK (IETB40) MACH ELV-18 RUDOER ARC97-019 IA81 LVAPCALLHL SEALED) ORB. FUSELAGE 000. 20.000 30.000 165.000 **[**0□04



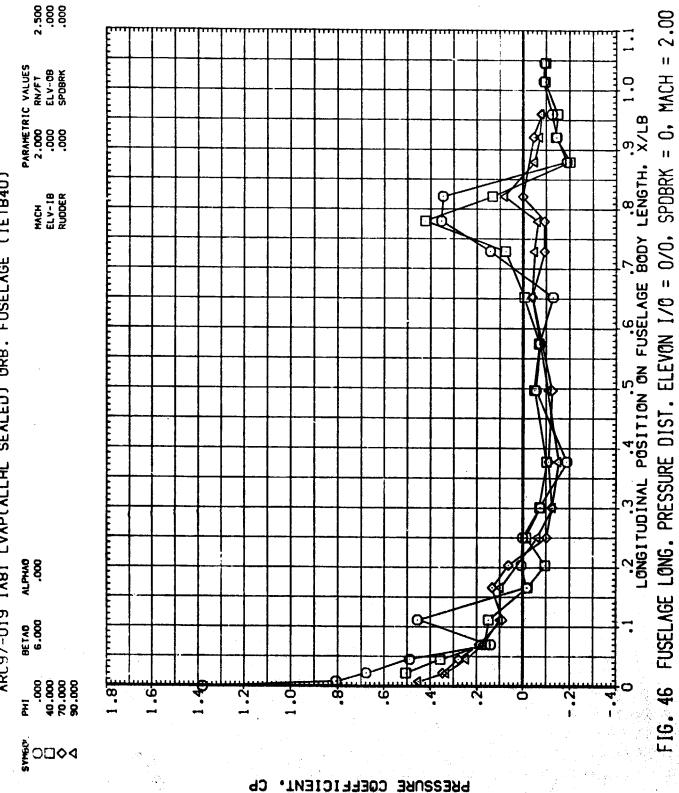
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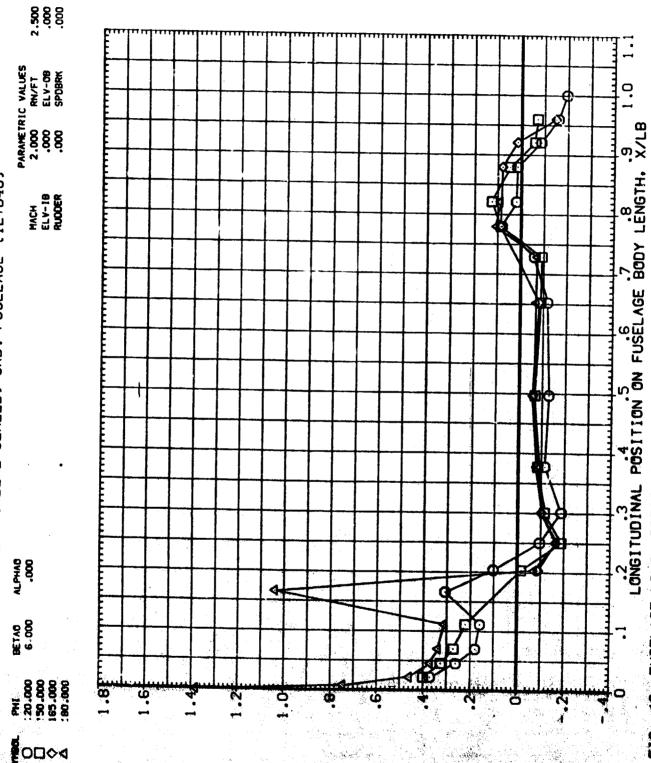
是一个时间,我们就是一个时间,我们就是一个时间,我们就是一个时间,我们就是一个时间,我们就是一个时间,我们就是一个时间,我们就是一个时间,我们就是一个时间,我们 第一个时间,我们就是一个时间,我们就是一个时间,我们就是一个时间,我们就是一个时间,我们就是一个时间,我们就是一个时间,我们就是一个时间,我们就是一个时间,我们 2.500 000.00 FIG. 46 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.00 LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH. X/LB PARAMETRIC VALUES 2.000 RN/FT .000 ELV-08 ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB40) MACH ELV-18 RUDDER ALPHAO .000 8£146 4.000 **₹**0□◊4

PRESSURE COEFFICIENT, CP

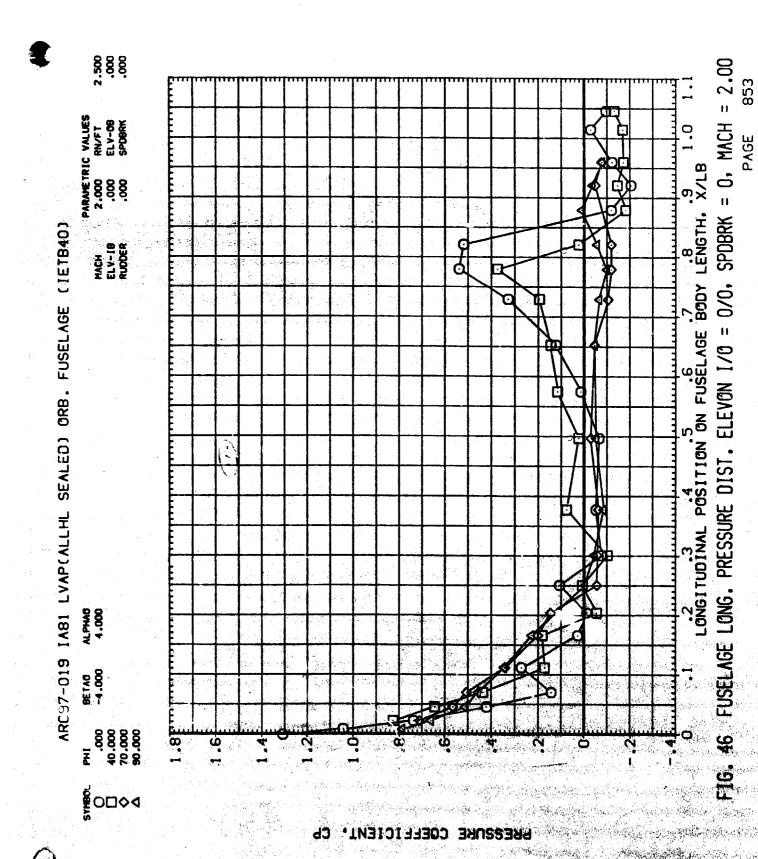
ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB40)



ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IET840)



SPOBRK = 0. MACH = 2.00PAGE FIG. 46 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0,



ARC97-019 IA81 LVAPCALLHL SEALED) ORB. FUSELAGE (IETB40)

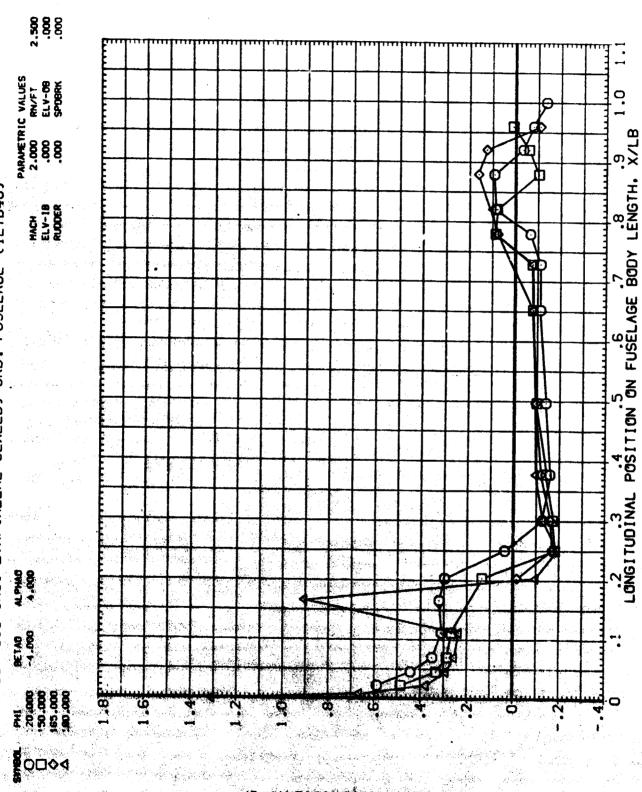


FIG. 46 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.00

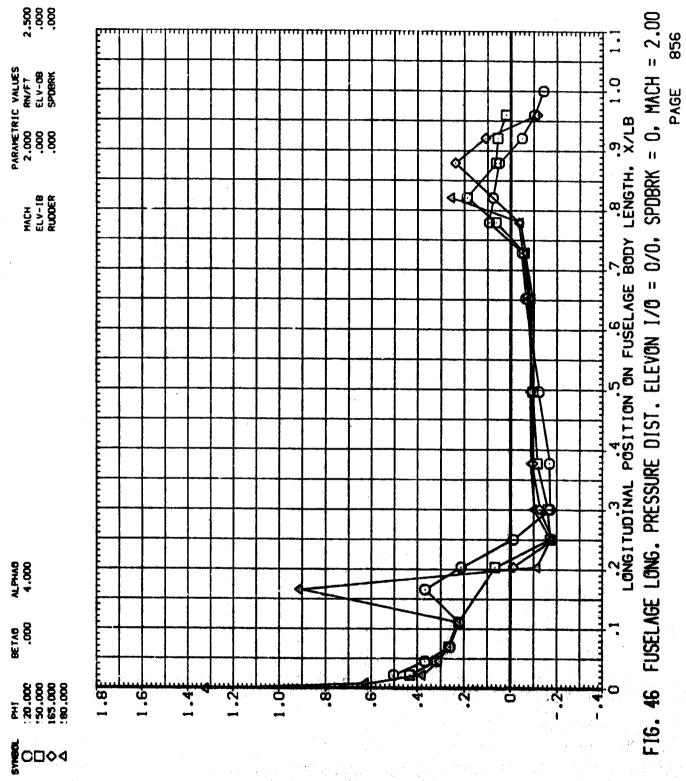
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2.500 PARAMETRIC VALUES 2.000 RN/F1 .000 ELV-08 LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH. X/LB ARC97-019 IA81 LVAP[ALLHL SEALED] ORB. FUSELAGE (IETB40) MACH ELV-1B RUDDER ALPHAG 4.000 BETAG .000 .000 .000 .000 .000 .000 1.8F 1.6

PRESSURE COEFFICIENT,

SPDBRK = 0, MACH = 2.00FIG. 46 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0.

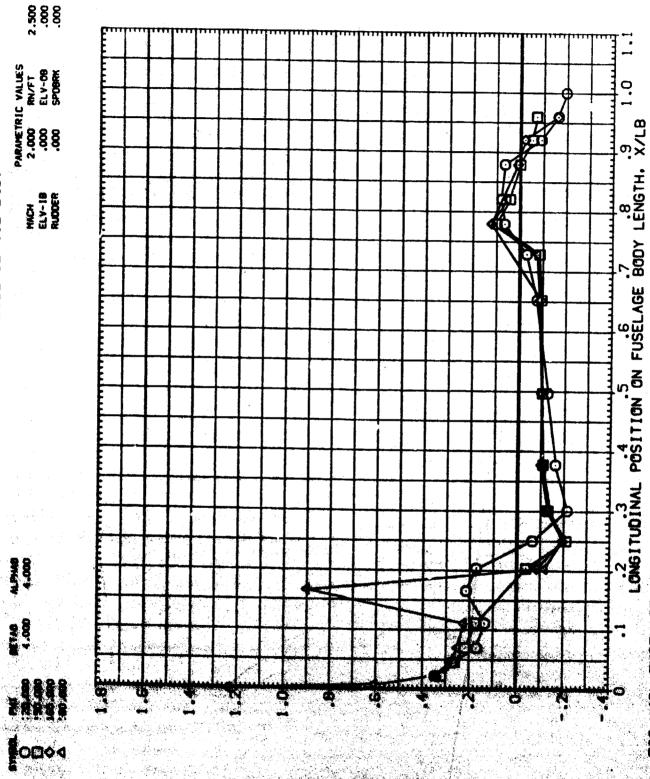
ARCS7 019 IA81 LVAPTALLHL SEALED) ORB. FUSELAGE (IETB40)



2.50 00.00 00.00 PARAMETRIC VALUES 2.000 RN/FT .000 ELV-08 0.1 .2 .3 .4 .5 .6 .7 .8 .9 LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH. X/LB ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB40) MACH ELV-18 RUDDER ALPHAD 4.000 **BETAG** 4.000 74 76,000 76,000 90,000

FIG. 46 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPOBRK = 0, MACH = 2.00

ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB40)



SPDBRK = 0, MACH = 2.00PAGE FIG. 46 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0.

ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB40) MACH ELV-18 RUDDER ALPHA0 6.000 9ETAG .000 6.000 26.000 26.000 26.000 0004

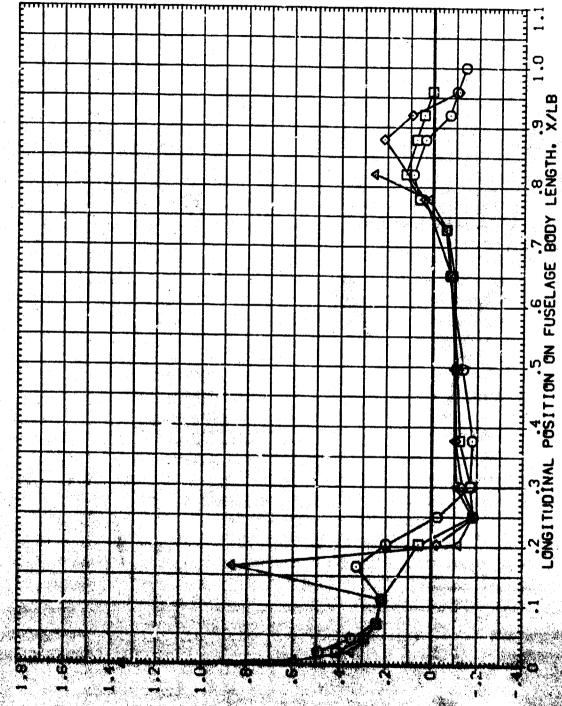
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FIG. 46 FUSELAGE LONG. PRESSURE DIST. ELEVON 1/0 = 0/0. SPDBRK = 0, MACH = 2.00 PAGE 859 LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH, X/LB

PARAMETRIC VALUES 2.000 RN/FT .000 ELV-08 ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB40) MACH ELV-18 RUDDER

2.50 .99. .99.



FISELAGE LONG. PRESSURE DIST. ELEVON 1/0 = 0/0. SPOBRK = 0. MACH = 2.00 PAGE 860

3

2.500. PARAMETRIC VALUES 2.200 RN/F1 .000 ELV-08 .2 .3 .4 .5 .6 .7 .8 .9 1.0 LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH, X/LB ARC97-019 1A81 LVAP(ALLHL SEALED) ORB. FUSELAGE (TETB41) MACH ELV-18 RUDDER ALPHA0 -6.000 BETAO .000 **8** ○□ ◊ 4

PRESSURE COEFFICIENT.

FIG. 47 FUSELAGE LONG. PRESSURE DIST. ELEVON 1/0 = 0/0, SPDBRK = 0, MACH = 2.20
PAGE 861

2.500 000. PARAMETRIC VALUES 2.200 RN/FT .000 ELV-08 ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB41) MACH ELV-18 RUDDER ALPHA0-6.000 BETAG .000 7H1 20.000 30.000 165.000 1.8F 1.0 1.2 9 PRESSURE COEFFICIENT.

FIG. 47 FUSELAGE LONG. PPESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.20

.2 .3 .4 .5 .6 .7 .8 .9 1.0 LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH, X/LB

PRESSURE COEFFICIENT.

(*)

SPOBRK = 0, MACH = 2.20PAGE FIG. 47 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0,

2.500 .000 PARAMETRIC VALUES 2.200 RN/FT .000 ELV-08 居 .2 .3 .4 .5 .6 .7 .8 .9 LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH, X/LB ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB41) MACH ELV-18 RUDDER ALPHAD -4.000 Q BETAB -4.000 1.8Fm PHI : 20.000 : 50.000 : 65.000 8 9. 1.2 -.2 **№**0□◊4

PRESSURE COEFFICIENT.

FIG. 47 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.20

2.500 PARAMETRIC VALUES 2.200 RN/FT .000 ELV-08 1.0 2 .3 .4 .5 .6 .7 .8 .9 LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH. X/LB ARC97-019 1A81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB41) MACH ELV-18 RUDDER ALPHA0 -4.000 9E TAO .000 1.8FTT .300 40,000 70,000 90,000 8 1.6 1.2 ٠. د. 1.4

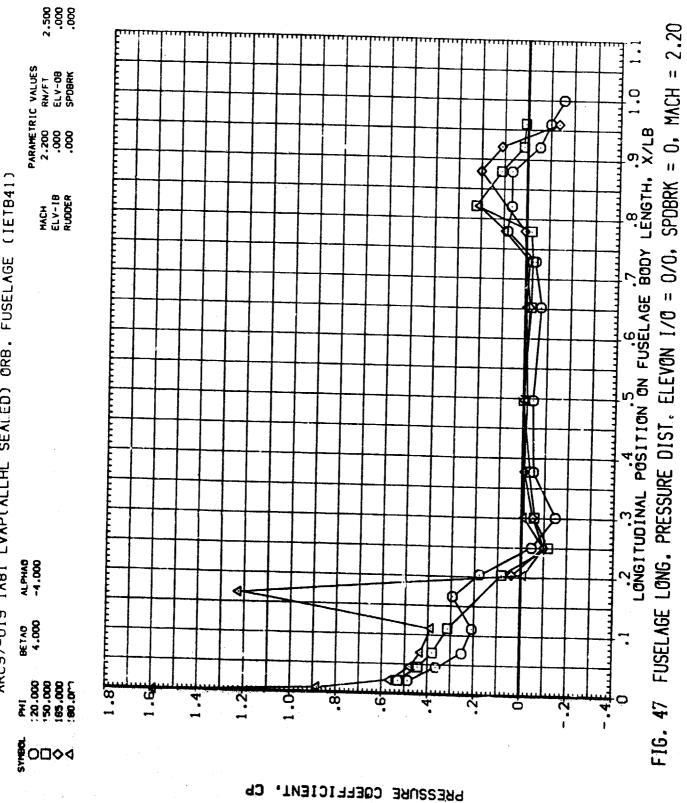
PRESSURE COEFFICIENT.

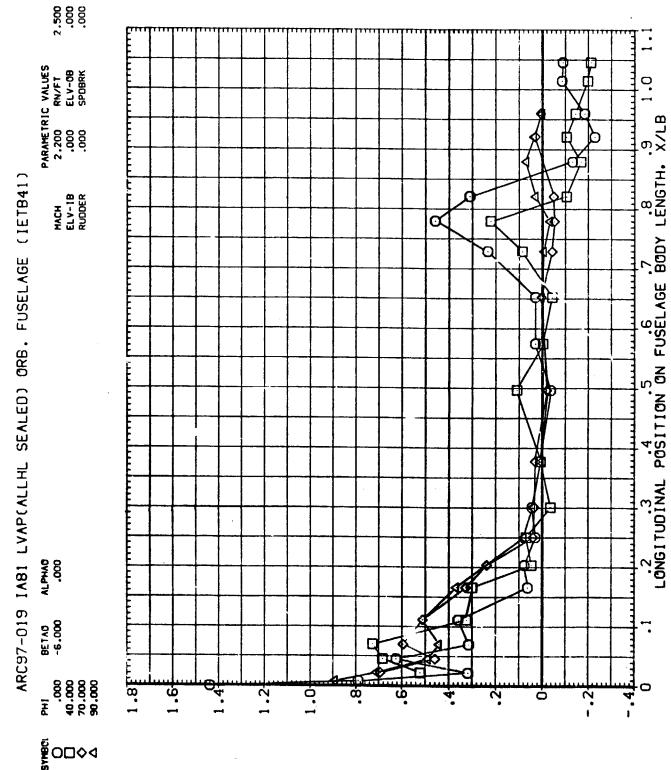
FIG. 47 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.20 PAGE

		HACH ELV-18 RUDDER							φ			
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2.500 .000 .000 PARAMETRIC VALUES 2.200 RN/FT .000 ELV-08 .2 .3 .4 .5 .6 .7 .8 .9 1.0 LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH, X/LB ARC97-019 1A81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB41) MACH ELV-1B RUDDER ALPHA0 -4.000 9ETAG 4.000 1.8F 8 1.2 9. 1.4 Syre@C □ ◇ △

FIG. 47 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.20

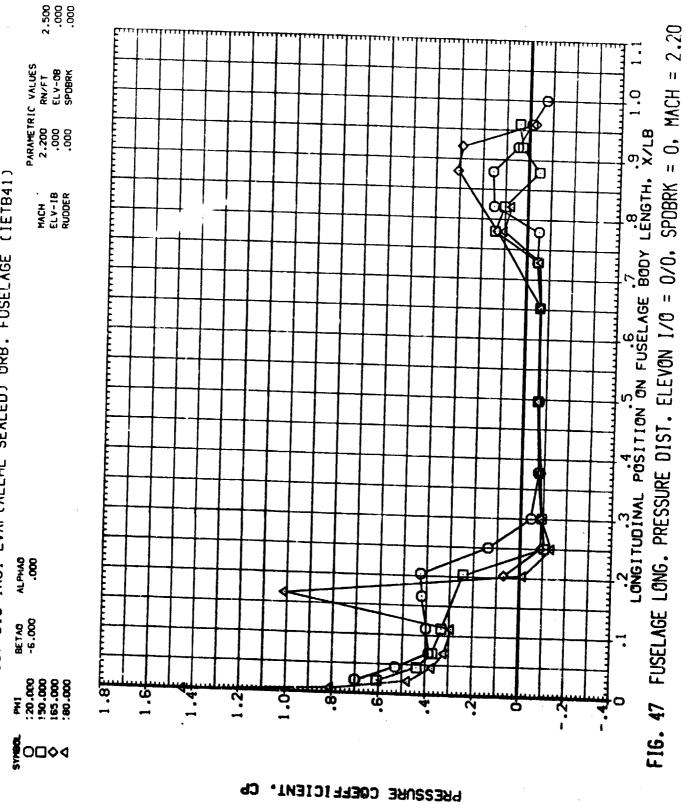




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FIG. 47 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.20 PAGE

ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB41)



2.500 PARAMETRIC VALUES
2,200 RN/FT
.000 ELV-08 ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB41) MACH ELV-18 RUGDER α ALPHAG. BETAG -4.000 1.8E 1.6 요. 1

FIG. 47 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.20

.2 .3 .4 .5 .6 .7 .8 .9 LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH. X/LB

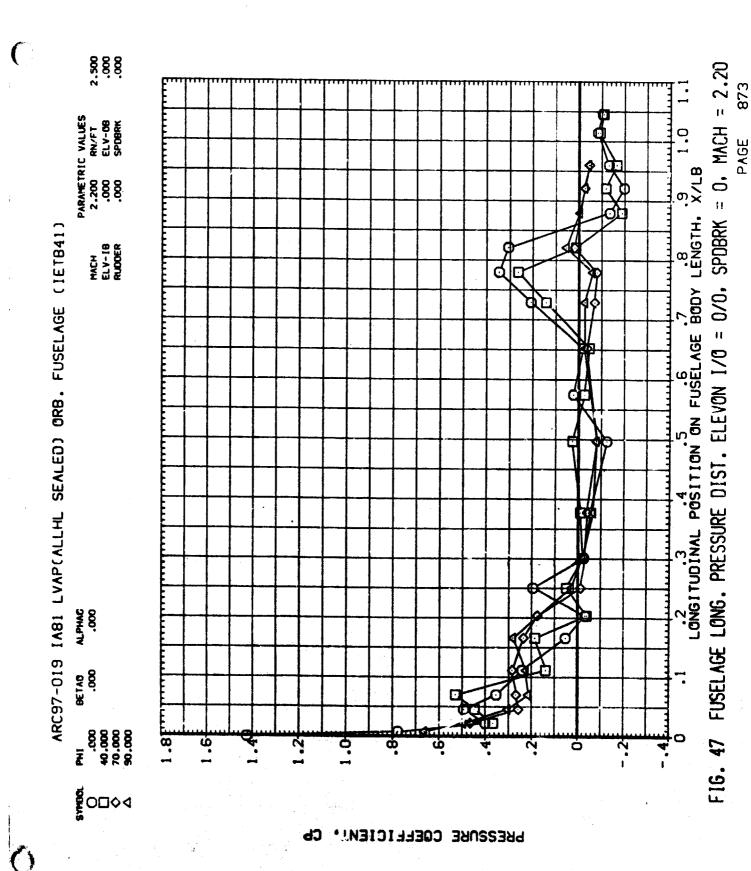
PRESSURE COEFFICIENT, CF

2.500 PARAMETRIC VALUES 2.200 RN/FT .000 ELV-08 ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB41) MACH ELV-18 RUDOLR 8ETA6 -4.000 18. 1.6 <u>o</u>. **∮**00004 PRESSURE COEFFICIENT

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SPDBRK = 0. MACH = 2.201.0 1.1 LONGITUDÎNAL POSITION ON FUSELAGE BODY LENGTH. X/LB FIG. 47 FUSELAGE LONG. PRESSURE DIST. ELEVON 1/0 = 0/0,

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FIG. 47 FUSELAGE LONG. PRESSURE DIST. ELEVON I/0 = 0/0, SPDBRK = 0, MACH = 2.20

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2.500 FIL. 47 FUSELAGE LONG. PRESSURE DIST. ELEVON 1/0 = 0/0, SPDBRK = 0, MACH = 2.20 PARAMETRIC VALUES
2.200 RN/F1
.000 ELV-08 .2 .3 .4 .5 .6 .7 .8 .9 LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH. X/LB ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB41) MACH ELV-18 RUDDER 0 àф ALPHA0. 8FTA0 4.000 1.8F . 000 40 .000 70 .000 8. 1.6 P. 1

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2.56 9.96 9.90 9.90 O .1 LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH. X/LB 1.0 1.1 FIG. 47 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0. SPOBRK = 0. MACH = 2.20 PARAMETRIC VALUES
2.200 RN/FT
.000 ELV-08 ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB41) MACH ELY-18 RUDDER ALPHA6.000 **BETAG** 4.000 1.8 20.000 150.000 165.000 **ਛੂ**ට□◊4 PRESSURE COEFFICIENT,

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2.50 000.00 PARAMETRIC VALUES 2.200 RN/FT .000 ELV-08 ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB41) MACH ELV-18 RUDDER O ID ALPHAG. 6.000 1.8Fm 741 - 000 - 8. 9. **₹**0□◊4

FIG. 47 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.20 .2 .3 .4 .5 .6 .7 .8 .9 LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH, X/LB

2.50 0.00 0.00 0.00 PARMETRIC VALUES 2.200 RN/FT .000 ELV-08 1.0 .2 .3 .4 .5 .6 .7 .8 .9 LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH. X/LB ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB41) MACH ELV-18 RUDDER ALPHAB. 6.000 74.1 20.000 155.000 1.8 8 1.6 <u>.</u> ¥0□04 PRESSURE COEFFICIENT,

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FIG. 47 FUSELAGE LONG. PRESSURE DIST. ELEVON I/0 = 0/0, SPDBRK = 0, MACH = 2.20

2.500 PARAMETRIC VALUES 2.200 RN/FT .000 ELV-08 0. .2 .3 .4 .5 .6 .7 .8 .9 LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH. X/LB ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB41) MACH ELV-18 RUDDER Ħ ALPHA0 4.000 BETAG -4.000 40.000 70.000 90.000 1.8F 8. 1,6 0 1.2

FIG. 47 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.20

2.500 PARAMETRIC VALUES 2.200 RN/FT .000 ELV-08 ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB41) :ACH ELV-18 RUDDER ALPHAD 4.000 9€1AG -4.000 741 20.000 165.000 80.000 1.2 œ **E**O□◊4

FIG. 47 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0. SPDBRK = 0. MACH = 2.20 .2 .3 .4 .5 .6 .7 .8 .9 1.0 LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH, X/LB

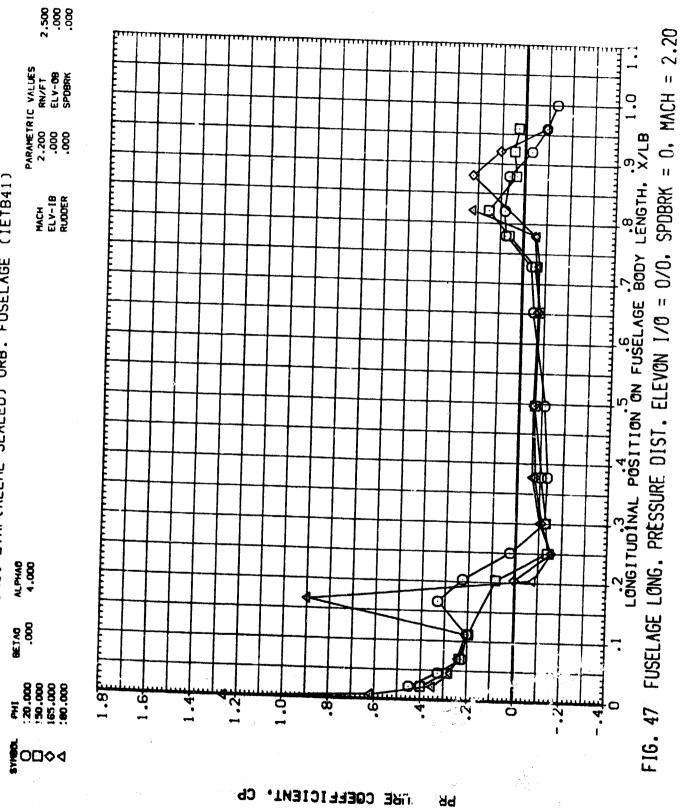
PARAMETRIC VALUES 2.200 RN/FT .000 ELV-08 ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB41) MACH ELV-1B RUDDER Q ALPHA0 4.000 8ETAO .GÚO 6.000 70.000 90.000 **®**O□◊4

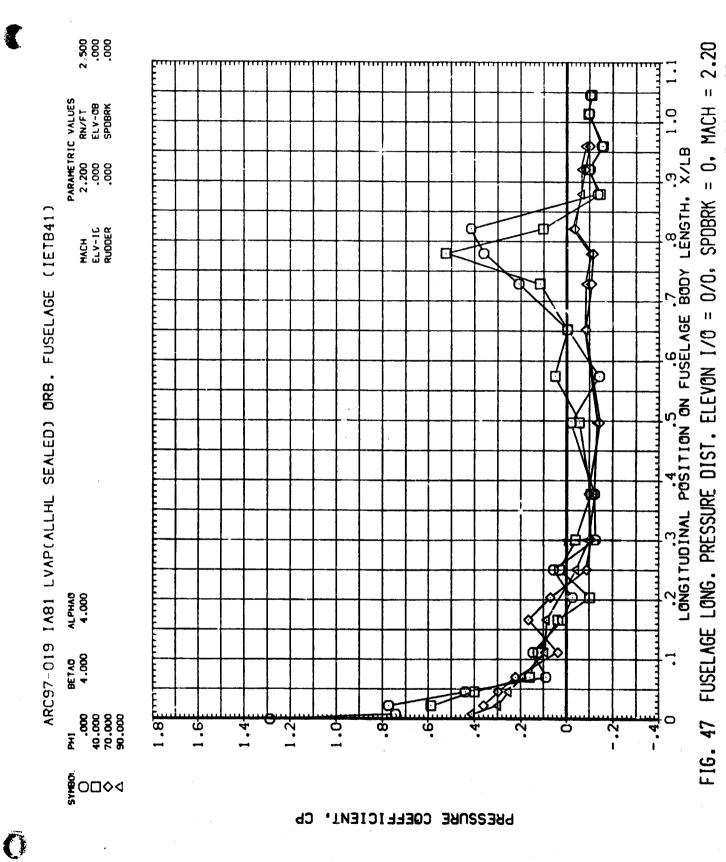
2.500 .000 .000

FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPOBRK = 0, MACH = 2.20 .2 .3 .4 .5 .6 .7 .8 .9 LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH, X/LB FIG. 47

1.0

ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB41)



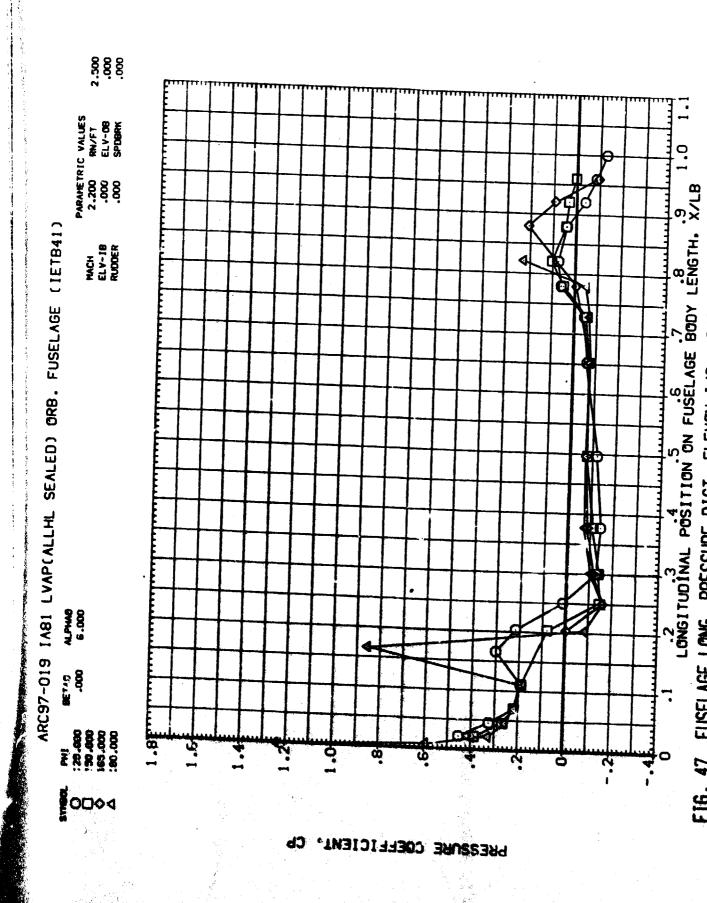


2.500 PARAMETRIC VALUES 2.200 RN/FT .000 ELV-08 ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB41) MACH ELV-18 RUDDER ALPHAG 4.000 **BETAG 4.000** 1.8Fm 7HI 120.000 150.000 165.000 1.6 œ **E**O□◊4 PRESSURE CORFFICIENT.

FIG. 47 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0. SPDBRK = 0, MACH = 2.20 LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH. X/LB

2.500 FIG. 47 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0. SPDBRK = 0. MACH = 2.20 PAGE 885 2.200 RN/FT .000 ELV-08 .000 SPOBRK LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH, X/LB ARC97-019 IA81 LVAP(ALLML SEALED) ORB. FUSELAGE (IETB41) HACH ELV-18 RUDDER 6.000 **₹**0□◊4

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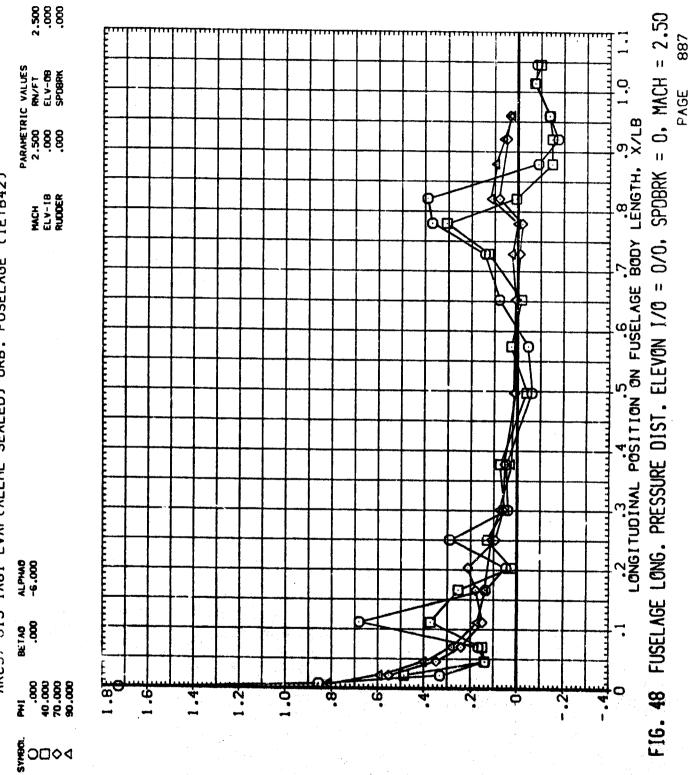


SPOBRK = 0, MACH = 2.20

FIG. 47 FUSELAGE LONG. PRESSURE DIST. ELEVON I/0 = 0/0,

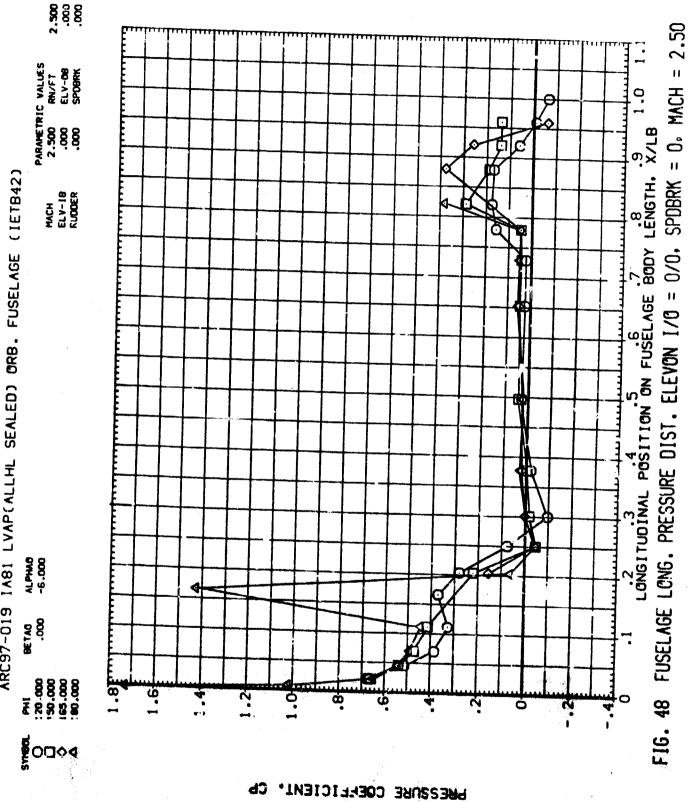
ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB42)

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ARC97-019 1A81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB42)



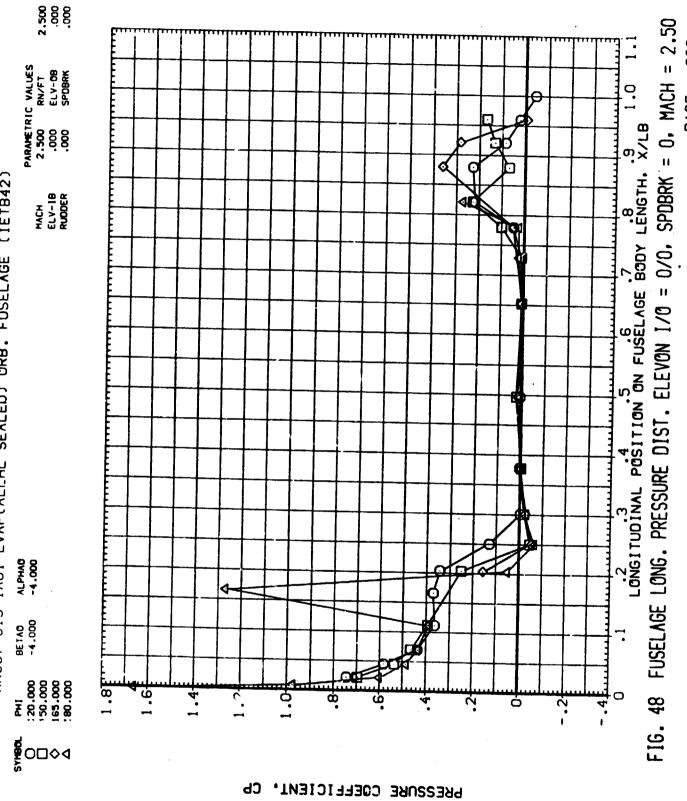
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2.500 PARAMETRIC VALUES 2.500 RN/FT .000 ELV-0B .2 .3 .4 .5 .6 .7 .8 .9 LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH. X/LB ARCS7-019 IA81 LVAP(ALLHL SEALED) ORB, FUSELAGE (IE1842) MACH ELV-18 RUDDER φþ ALPHA0 -4,000 BETA0 -4,000 1.8FTT .000 40.000 70.000 90.000 8. . 6 0.1 1.6 1.4 1.2 Ó § 0□◊4

FIG. 48 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.50

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ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB42)



PARAMETRIC VALUES 2.500 RN/FT .000 ELV-0B ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB42) MACH ELV-18 RUDDER þ ALPHAB -4.000 RETAG .000 ·6 40.000 70.000 90.000 1.8F φ. <u>Μ</u> ώ 1.4 1.2 § O□◊⊲

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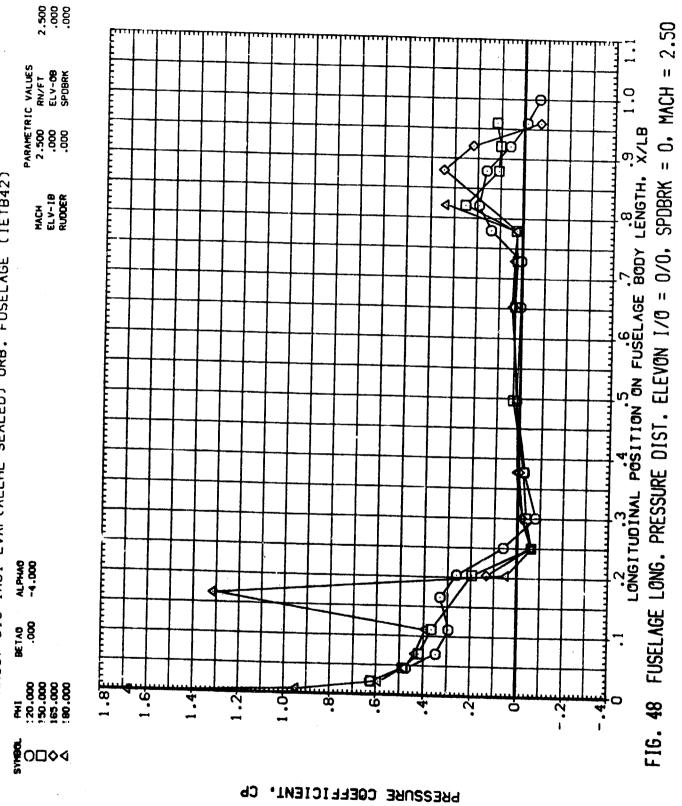
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PRESSURE COEFFICIENT, CP

FIG. 48 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.50

LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH, X/LB

ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB42)



2.500 PARAMETRIC VALUES 2.500 RN/F1 .000 ELV-08 .000 SPDBRK ARC97-019 1A81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB42) MACH ELV-18 RUDDER ALPHAD -4.000 8ETA0 4.000 18. 40,000 70,000 90,000 9 1.8F 6 1.Q 1.2

FIG. 48 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.50 LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH. X/LB

1.0

2.500 000.00 PARAMETRIC VALUES 2.500 RN/FT .000 ELV-08 .000 SP08RK ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB42) MACH ELV-18 RUGOER ALPHA0 -4.000 9ETAG 4.000 20.000 150.000 165.000 1.8F 9 Ř O□◊4 PRESSURE COEFFICIENT.

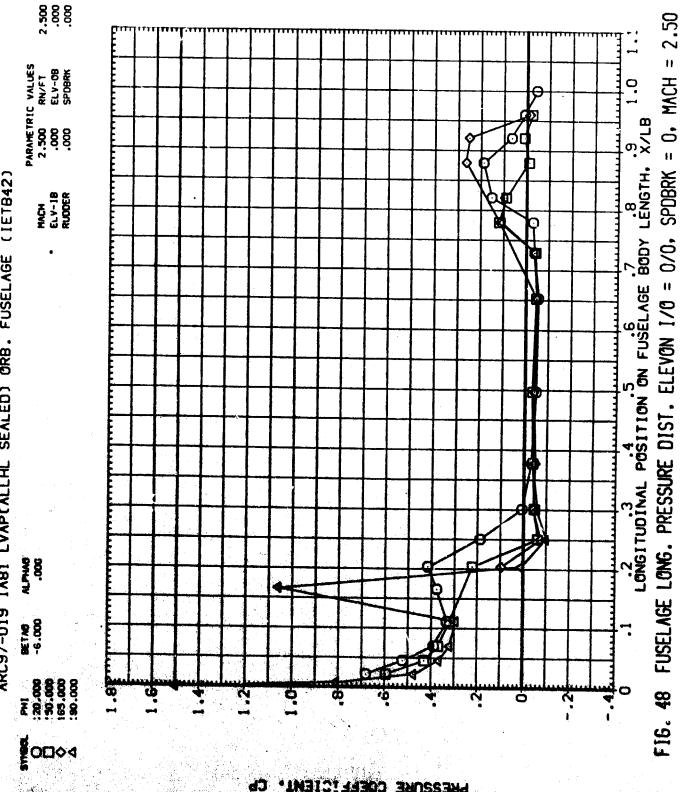
FIG. 48 FUSELAGE LONG, PRESSURE DIST. ELEVON 1/0 = 0/0, SPOBRK = 0, MACH = 2.50 LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH. X/LB

2.00.00 00.00 00.00 PARAMETRIC VALUES
2.500 RN/FT
.000 ELV-08
.000 SPDBRK LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH. X/LB ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB42) MACH ELV-18 RUDDER ALPHAG. BETAB -6.000 . 000 70.000 90.000 1.6 PRESSURE COEFFICIENT.

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FIG. 48 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.50

ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB42)



2.500 .000 .000 PARAMETRIC VALUES
2.500 RN/FT
.000 ELV-08
.000 SPDBRK .2 .3 .4 .5 .6 .7 .8 .9 LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH, X/LB ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB42) MACH ELV-18 RUDDER ALPHAD .000 9ETAG -4.000 40.900 70.900 90.900 1.6 **№**0□**◊**4 PRESSURE COEFFICIENT,

FIG. 48 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.50 PAGE 897

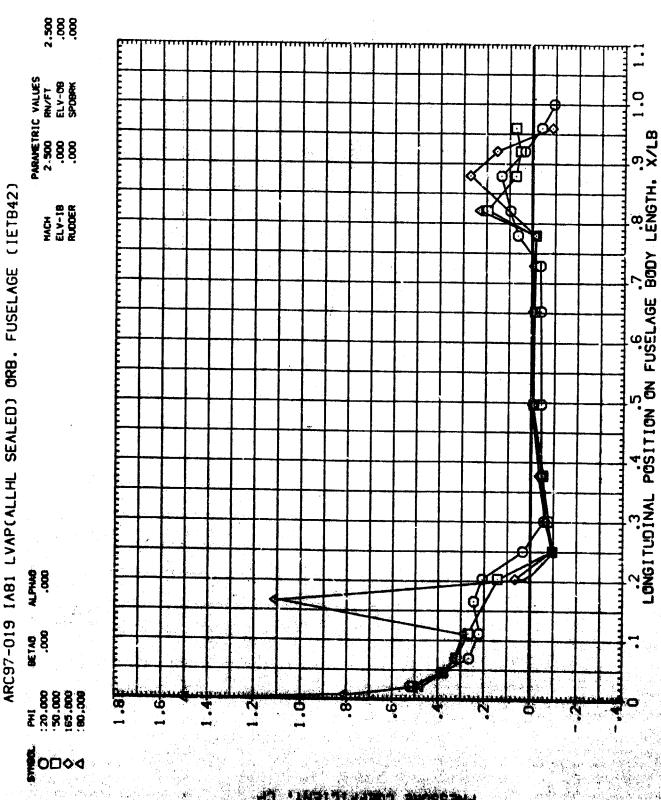
2.500 PARAMETRIC VALUES 2.500 RN/FT .000 ELV-08 .000 SPDBRK ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB42) MACH ELV-18 RUDDER বৈষ ALPHAB. BETAG -4.200 1.8 741 : 20.600 : 50.600 : 65.000 1.6 1.2 **№** O□◆4 PRESSURE COEFFICIENT,

SPDBRK = 0, MACH = 2.50.2 .3 .4 .5 .6 .7 .8 .9 LONGITUDINAL FOSITION ON FUSELAGE BODY LENGTH. X/LB FIG. 48 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0,

2.500 RN/FT .000 ELV-08 ARC97-019 IA81 LVAP(ALLHL SEALED) GRB. FUSELAGE (IETB42) MACH ELV-18 RUDDER ALPHA0 9ETA0 .000 PHI .000 70.000 90.000 8 9 **№**0□◊4

2.500

6 .1 .2 .3 .4 1.0 1.1 FIG. 48 FUSELAGE BODY LENGTH. X/LB FIG. 48 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPOBRK = 0, MACH = 2.50 PAGE BOD



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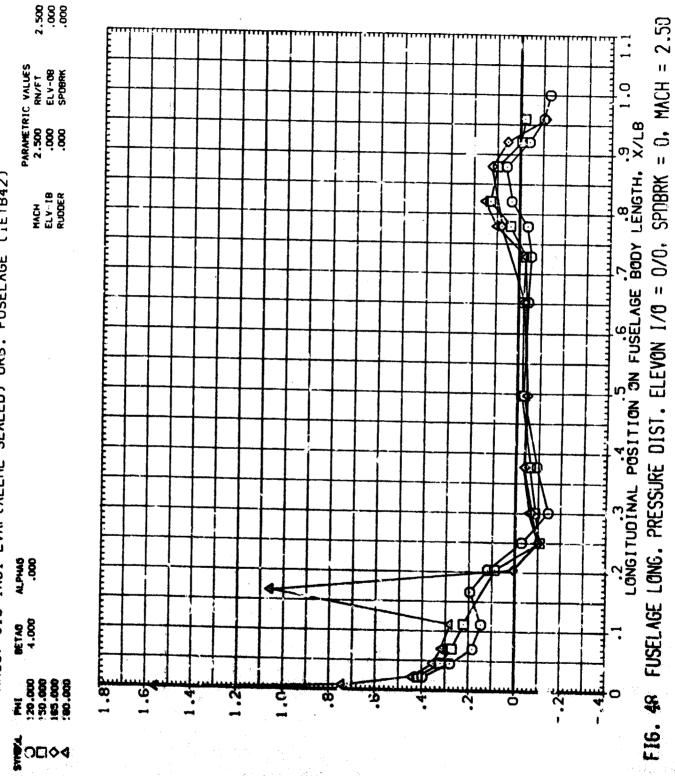
FIG. 48 FUSELAGE LONG. PRESSURE DIST. ELEVON I/0 = 0/0, SPDBRK = 0, MACH = 2.50

900

2.500 PARAMETRIC VALUES 2.500 RN/FT .000 ELV-08 ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB42) MACH ELV-18 RLODER ALPHAG .000 8£ 140 4.000 6.00 00.00 00.00 00.00 00.00

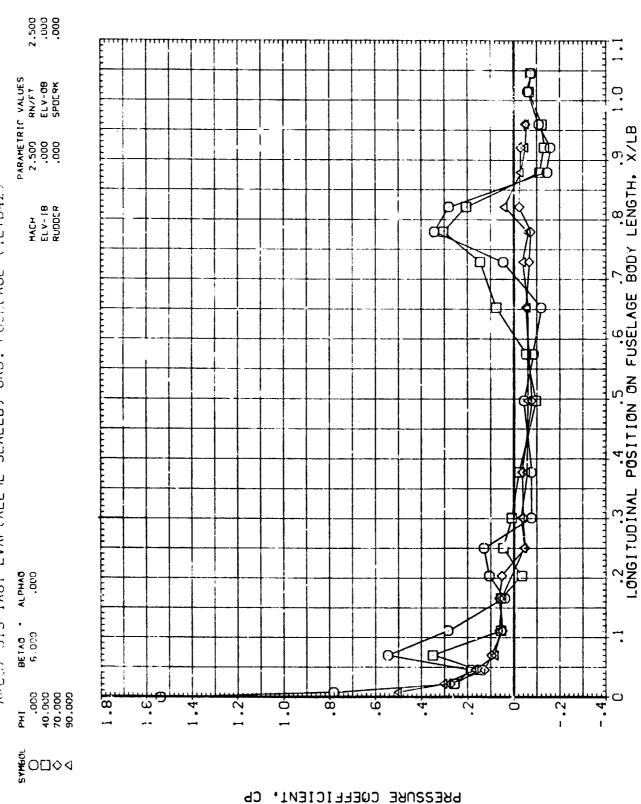
FIG. 48 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.50 1.0WGITUDINAL POSITION ON FUSELAGE BODY LENGTH. X/LB

ARC97-319 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB42) ALPHAG 9ETA0 4.000



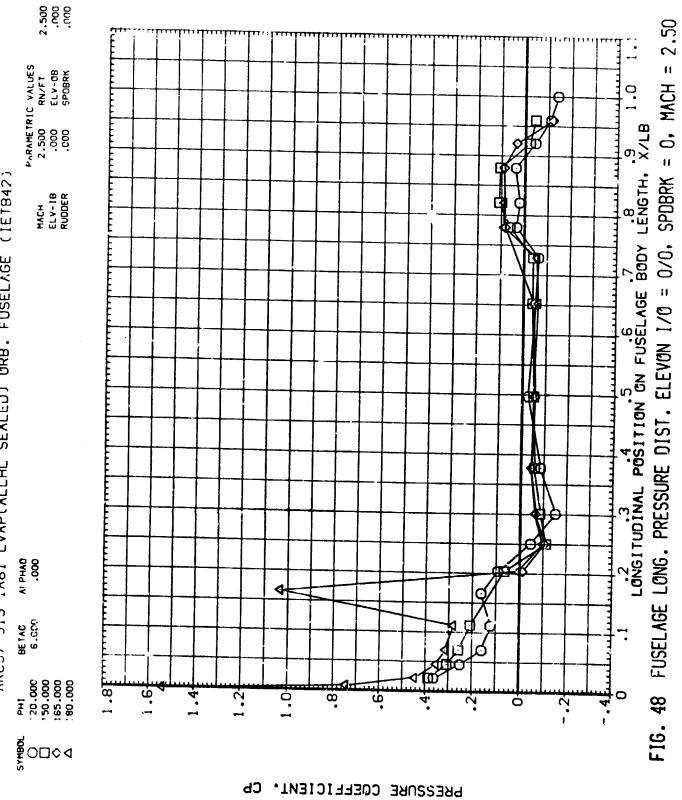
ARC97-319 IA81 LVAP(ALL4L SEALED) ORB. FUSELAGE (IE1842)

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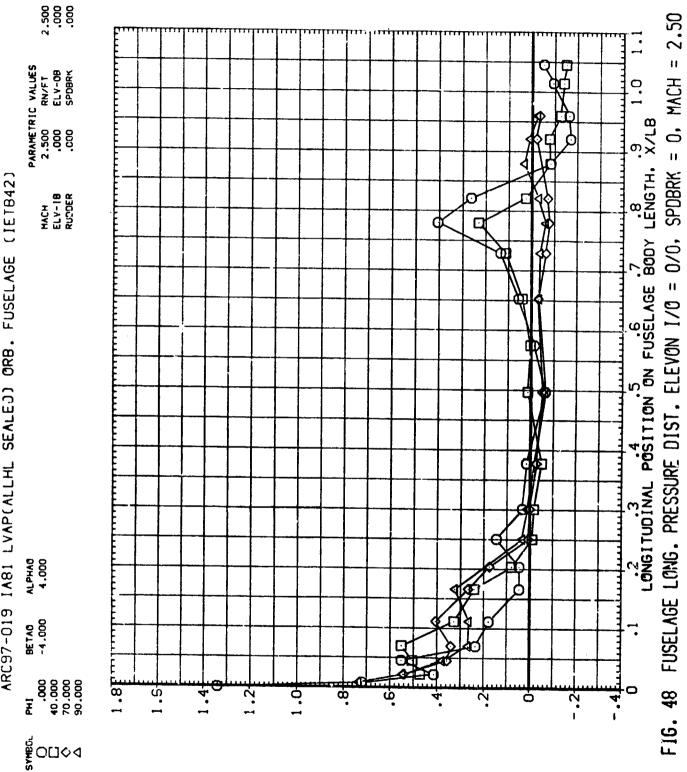


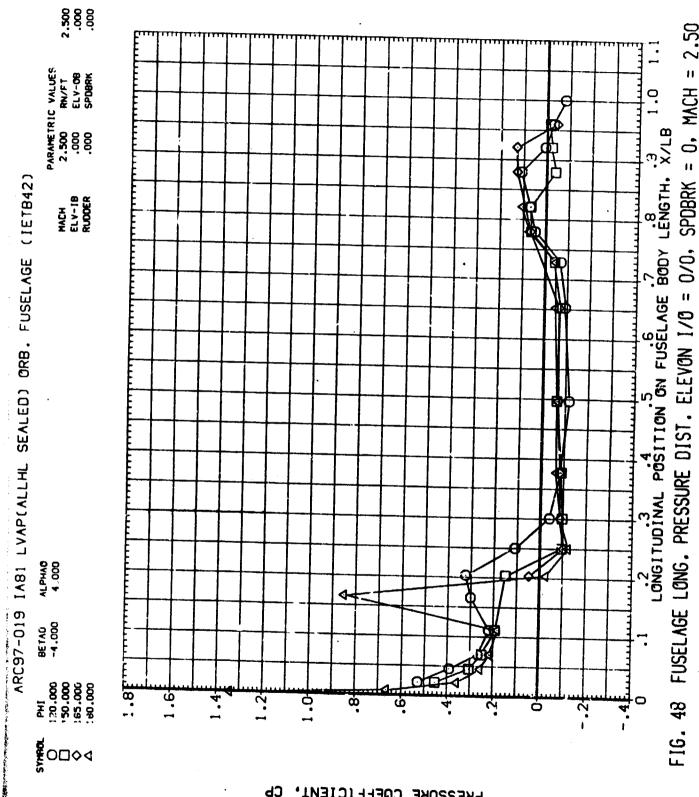
FIS. 48 FUSELAGE LANG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.50

ARC97-319 JA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB42)



ARC97-019 IA81 LVAP(ALLHL SEALEJ) ORB. FUSELAGE (IE1842)





SPDBRK = 0, MACH = 2.50

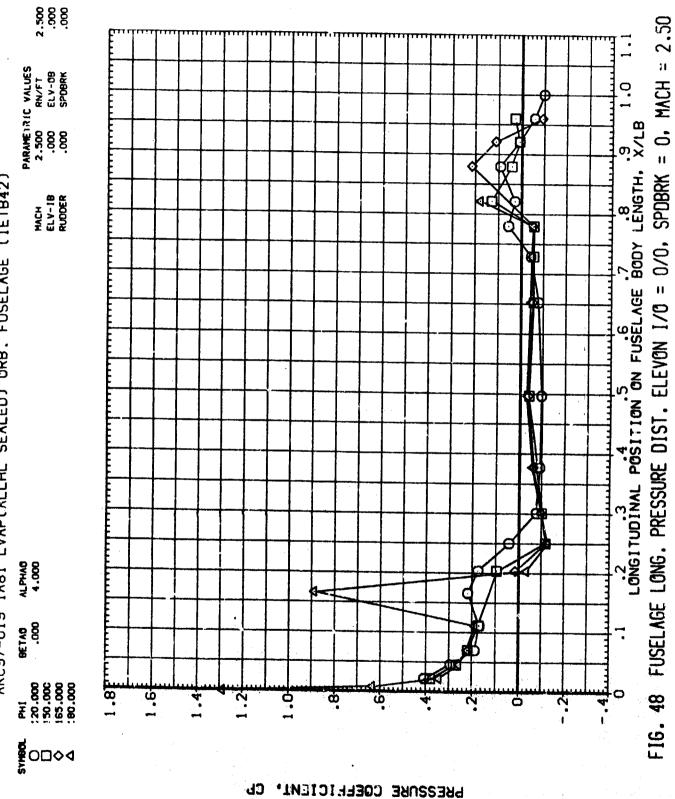
PRESSURE COEFFICIENT,

2.500 PARAMETRIC VALUES 2.500 RN/FT .000 ELV-0B .2 .3 .4 5 .6 .7 .8 .9 LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH. X/LB ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB42) MACH ELV-18 RUDDER ALPHA0 BETA€ .000 1.8 .000 40.000 70.000 90.000 ٦. <u>٩</u> ò 1.6

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FIG. 48 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.50

ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB42)



2.500 PARAMETRIC VALUES 2.500 RN/FT .000 ELV-08 0. LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH. X/LB ARC37-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB42) MACH ELV-18 RUDOER ALPHAG 4.000 BETAG 4.000 PH1 .000 40.000 70.000 1.8 1.6 φ SYREGE COLOR

SPDBRK = 0, MACH = 2.50

FIG. 48 FUSELAGE LONG. PRESSURE DIST. ELEVON 1/0 = 0/0,

PRESSURE COEFFICIENT, CP

2.500 .000 .000 PARAMETRIC VALUES 2,500 RN/FT .000 ELV-08 1.0 .2 .3 .4 .5 .6 .7 .8 .9 LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH. X/LB ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IET842) MACH ELV-18 RUDDER þ FIG. 48 FUSELAGE LONG. PRESSURE DIST. ELEVON 1/0 = 0/0, ALPHA0 4.000 8ETA0 4.000 PHI 20.300 30.900 165.900 1.6 8 9 **€**0□◊4

SPDBRK = 0, MACH = 2.50

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PRESSURE COEFFICIENT,

PARAMETRIC VALUES
2.500 RN/FT
.000 ELV-0B LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH. X/LB ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB42) MACH ELV-1B RUDDER d ALPHA9 6.000 8ETAG .000 .61 1.8E ,000 40,000 70,000 90,000 8 1.0 1.6 **№**0□◊◊

FIG. 48 FUSELAGE LONG. PRESSURE DIST. ELEVON I/O = 0/0. SPDBRK = 0. MACH = 2.50 PAGE 911

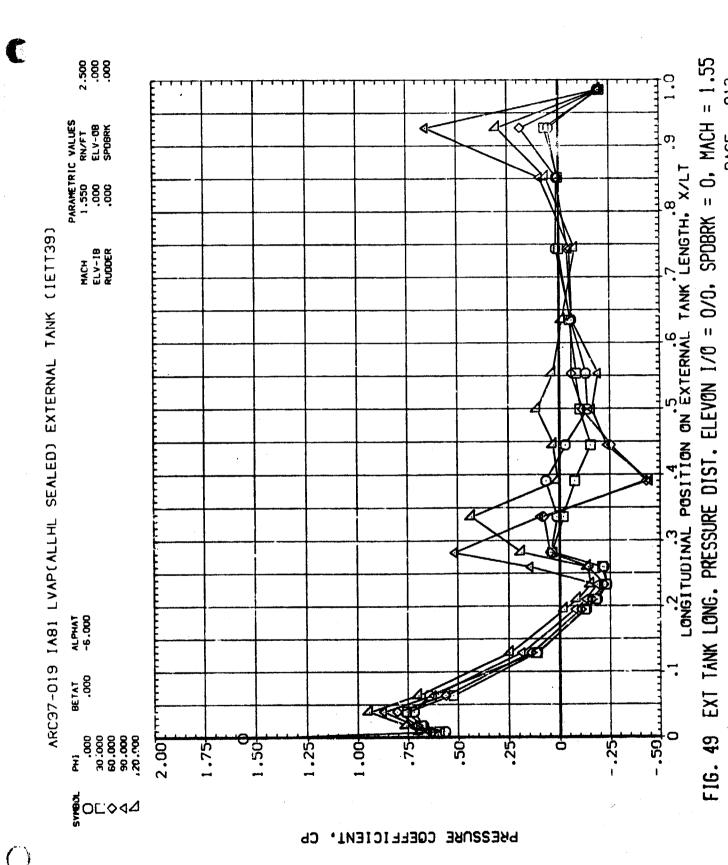
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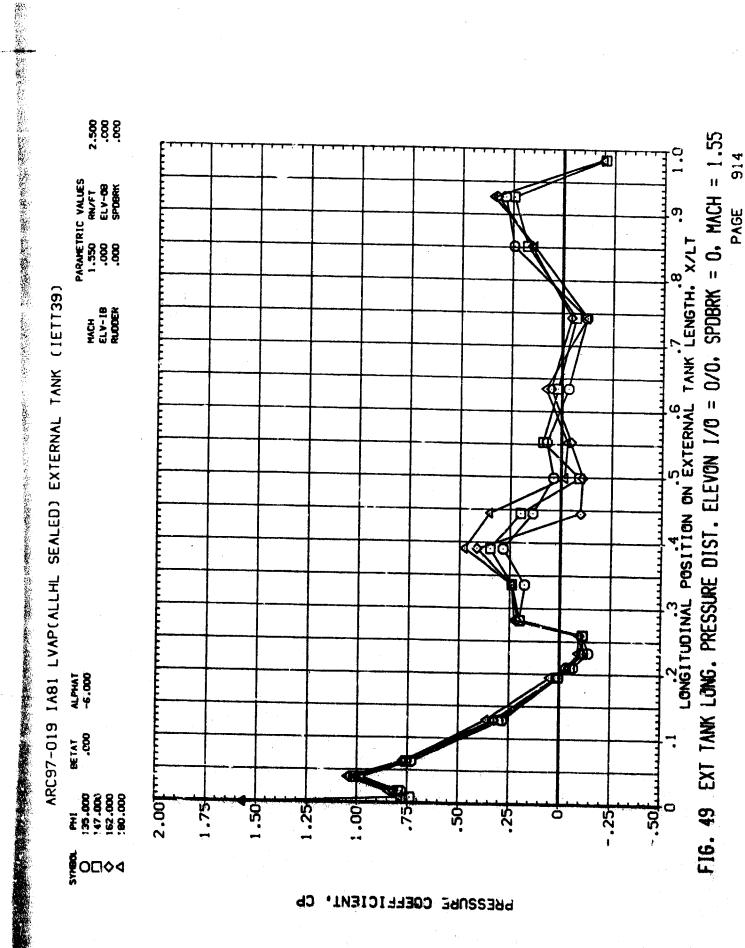
2.500 .000 .000 PARAMETRIC VALUES 2.500 RN/FT .000 ELV-08 .000 SPDBRK ARC97-019 IA81 LVAP(ALLHL SEALED) ORB. FUSELAGE (IETB42) MACH ELV-18 RUDOER ALPHAG 6.000 9ETAC .000 1.8FTTTTT 20.000 155.000 165.000 9 1.6 9. ά -.2 § 6 0 □ ◊ 4 PRESSURE COEFFICIENT.

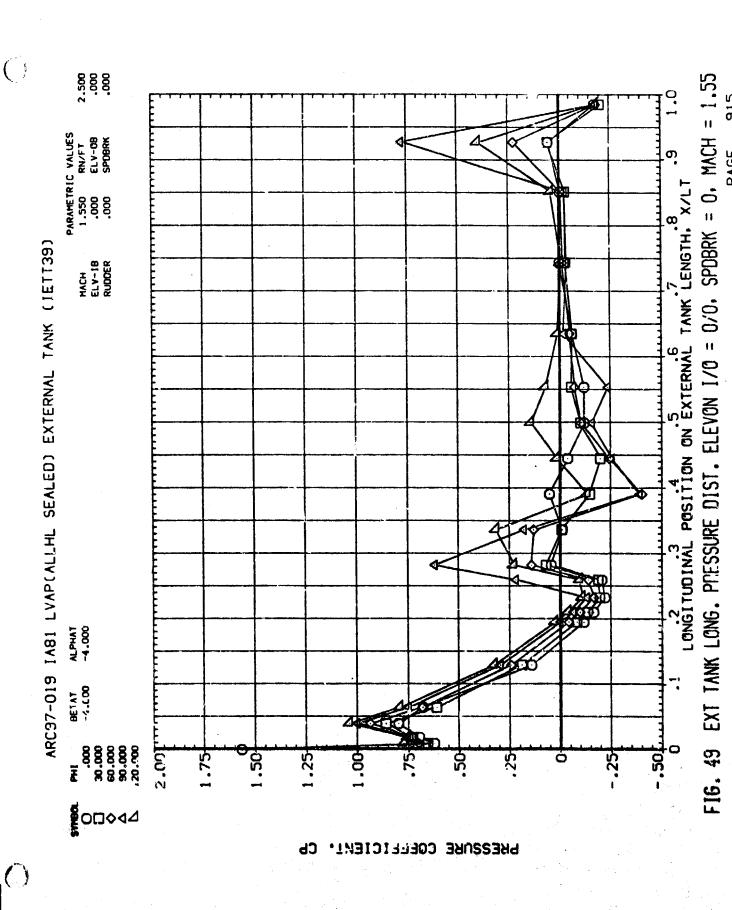
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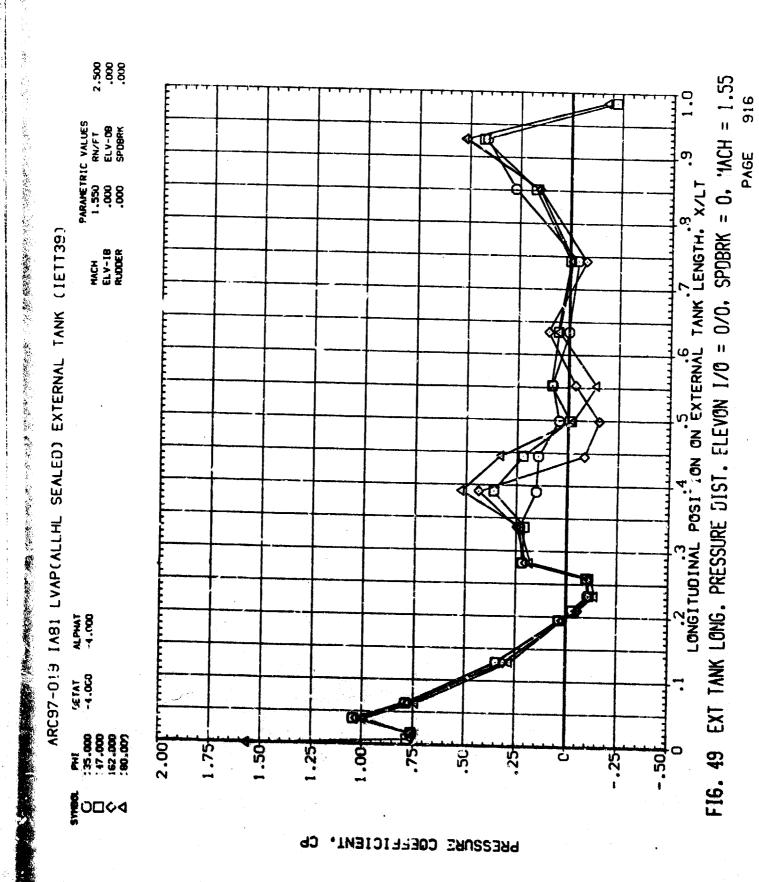
SPDBRK = 0, MACH = 2.50.2 .3 .4 .5 .6 .7 .8 .9 LONGITUDINAL POSITION ON FUSELAGE BODY LENGTH. X/LB FUSELAGE LONG. PRESSURE DIST. ELEVON 1/0 = 0/0. FIG. 48

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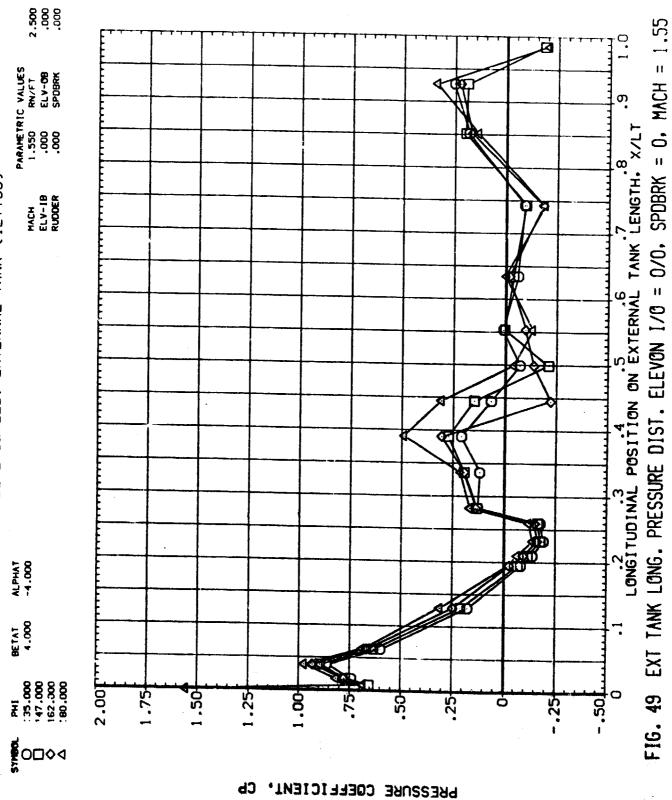
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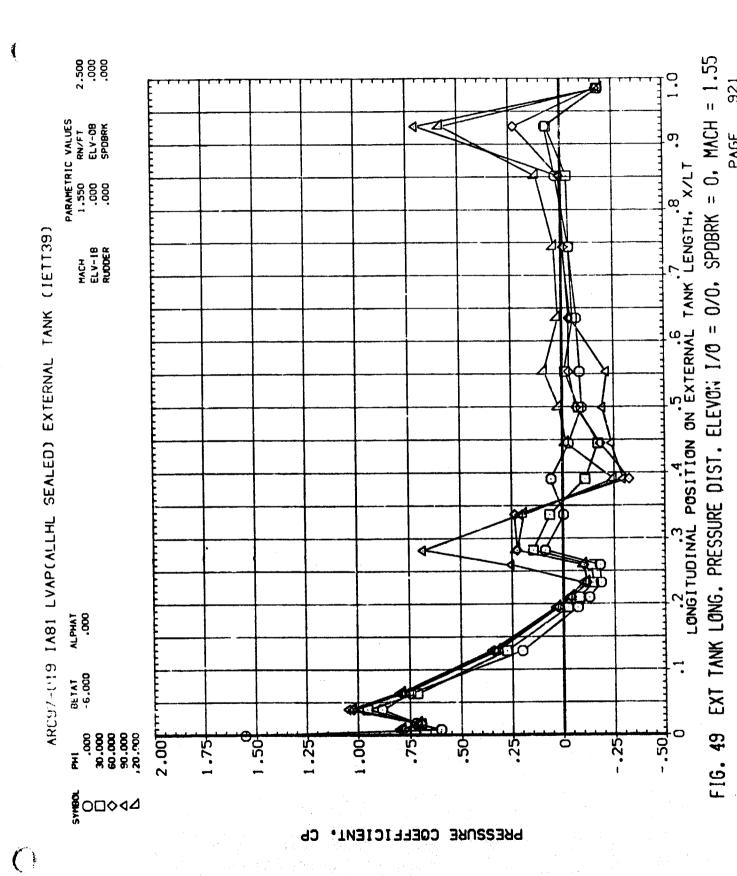
2.500 EXT TANK LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPOBRK = 0, MACH = 1.55 PARAMETRIC VALUES 1.550 RN/FT .000 ELV-08 LONGITUDINAL POSÍTION ON EXTERNAL TANK LENGTH. X/LT ARC97-019 IA81 LVAP(ALLHL SEALED) EXTERNAL TANK (IETT39) MACH ELV-18 RUDDER ALPHAT -4.000 BETAT .000 FIG. 49 PH1 :35.000 152.000 :80.000 2.00T 1.75 -.25 -.50 1.50 .25 25 50 **№**0□◊4

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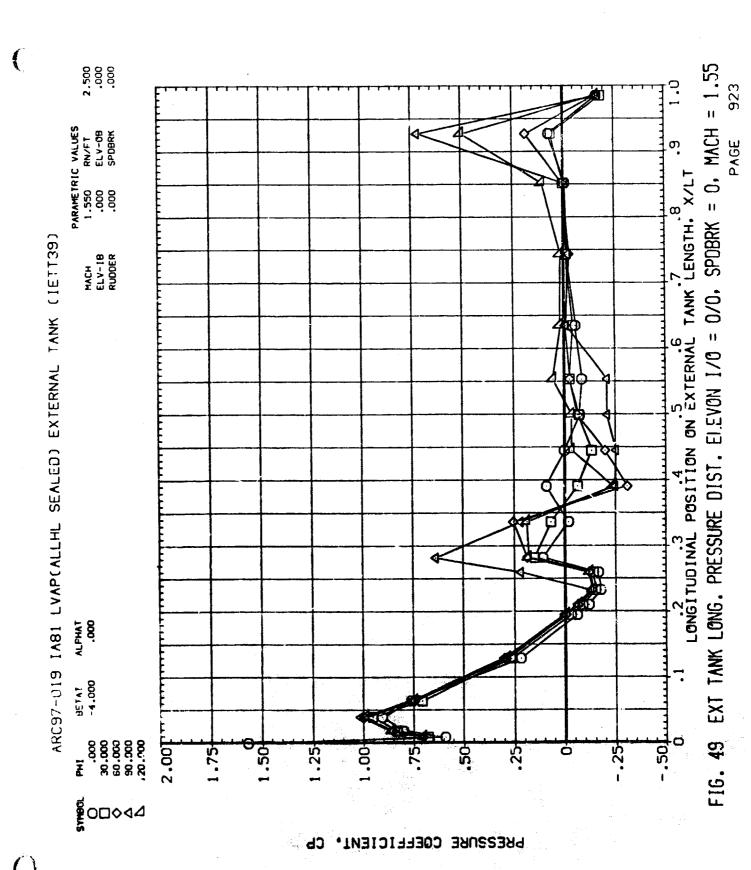
2.500 FIG. 49 EXT TANK LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPOBRK = 0, MACH = 1.55 PARAMETRIC VALUES
1.550 RN/F1
.000 ELV-08
.000 SPDBRK 4 LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH: X/LT ARC97-019 IA81 LVAP(ALLHL SEALED) EXTERNAL TANK (IETT39) MACH ELV-18 RUDDER ALPHAT -4.000 BETAT 4.000 .000 30.000 60.000 90.000 2.00F -.50 1.75 1.50 1.00 -.25 Ò PRESSURE COEFFICIENT.

ARC97-019 JAB1 LVAP(ALLHL SEALED) EXTERNAL TANK (IETT39)

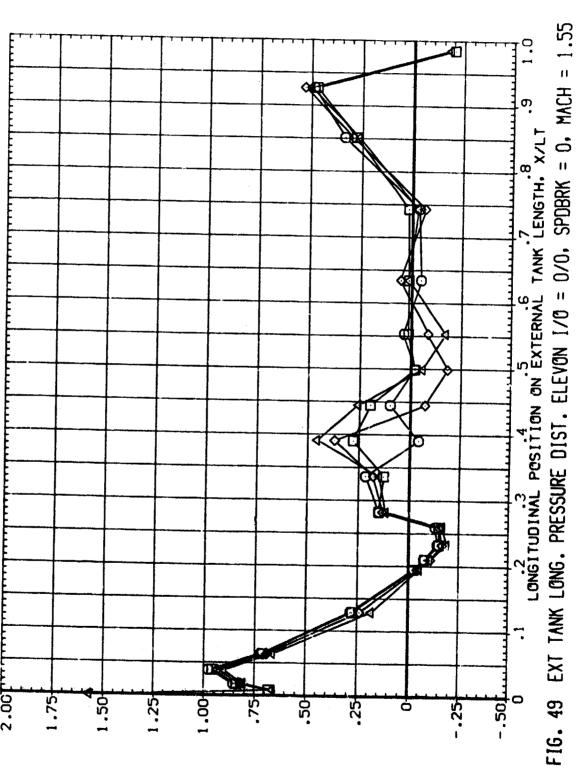




2.500 .000 FIG. 49 EXT TANK LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 1.55 PARAMETRIC VALUES 1.550 RN/FT .000 ELV-UB LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH, X/LT ARC97-019 IA81 LVAP(ALLHL SEALED) EXTERNAL 7ANK (1ETT39) MACH ELV-18 RUDDER ALPHAT .000 9€7A7 -6.000 PHI 135,000 147,000 162,000 2.00F 1.75 .50 23 8 -.50 50 .25 PRESSURE COEFFICIENT



2.500 PARAMETRIC VALUES
1.550 RN/FT
.000 ELV-0B
.000 SPOBRK ARC97-019 IA81 LVAP(ALLHL SEALED) EXTERNAL TANK (IETT39) MACH ELV-1B RUDDER ALPHAT. BETAT -4.000 PHI :35.000 :47.000 :62.000 2.00F 1.75 50



PRESSURE COEFFICIENT,

2.500 FIG. 49 EXT ANK LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 1.55 PARAMETRIC VALUES 1.550 RN/FT .000 ELV-0B LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH, X/LT ARC97-019 IA81 LVAP(ALLHL SEALED) ÉXTERNAL TANK (IETT39) MACH ELV-18 RUDDER ALPHAT .000 BE 1A1 PH1 .000 .000 .000 .000 .000 .201.000 2.00F 1.75 1.50 1.25 1.00 S. .25 -.25 -.50 **₽**C□◊44

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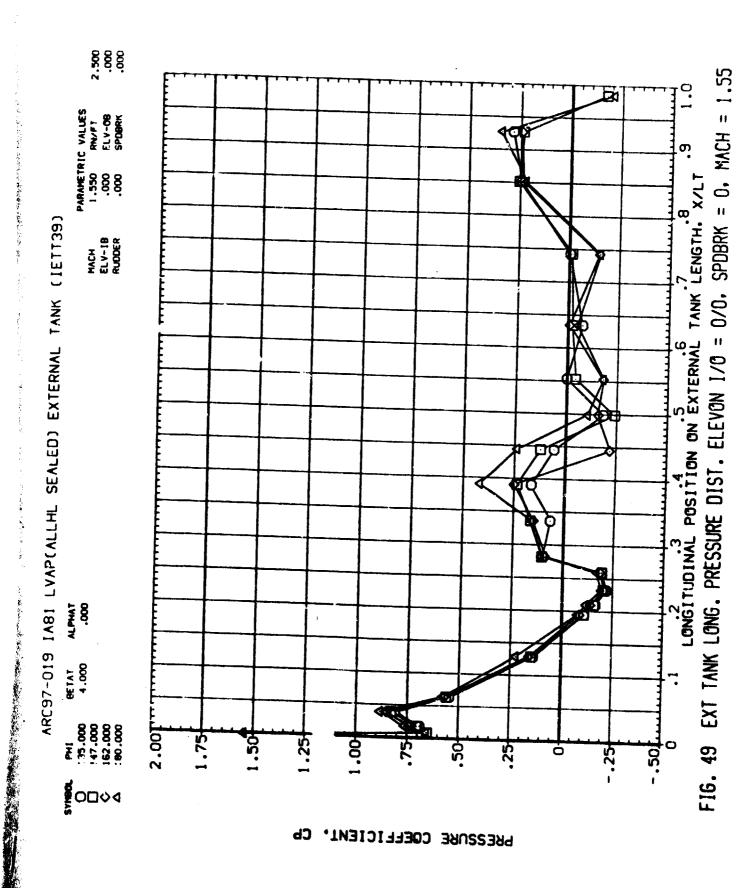
2.500 .000 PARAMETRIC VALUES
1.550 RN/FT
.000 ELV 98 ARC97-019 IA81 LVAP(ALLHL SEALED) EXTERNAL TANK (IETT39) MACH ELV-19 RUDDER ALPHAT BETAT .000 PHI :35.000 :47.000 :62.000 2.00F 1.75 1.50 1.25 1.00 Š. **2** ○□ ◊ 4 PRESSURE COEFFICIENT,

FIG. 49 EXT TANK LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 1.55 LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH. X/LT

-.25

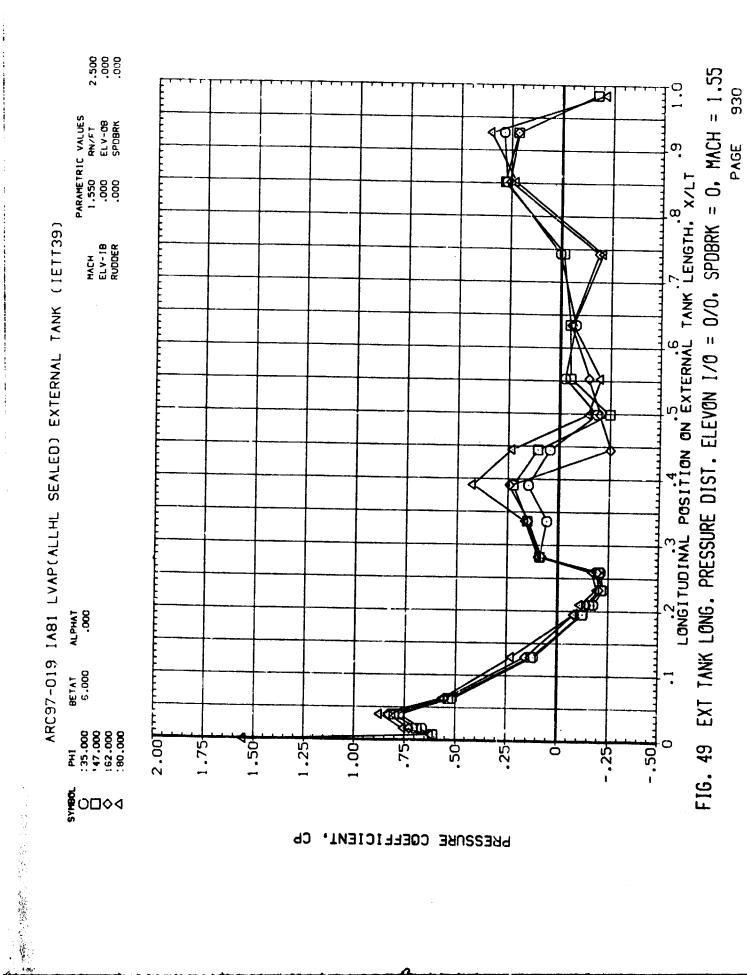
2.500 1.550 RN/FT 1.000 ELV-08 .000 SPOBRK LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH, X/LT ARC97-019 IA81 LVAP(ALLHL SEALED) EXTERNAL TANK (IETT39) MACH ELV-18 AUDOER ALPHAT. BE*AT 30.000 60.000 90.000 20.000 2.00T 1.75 -.50

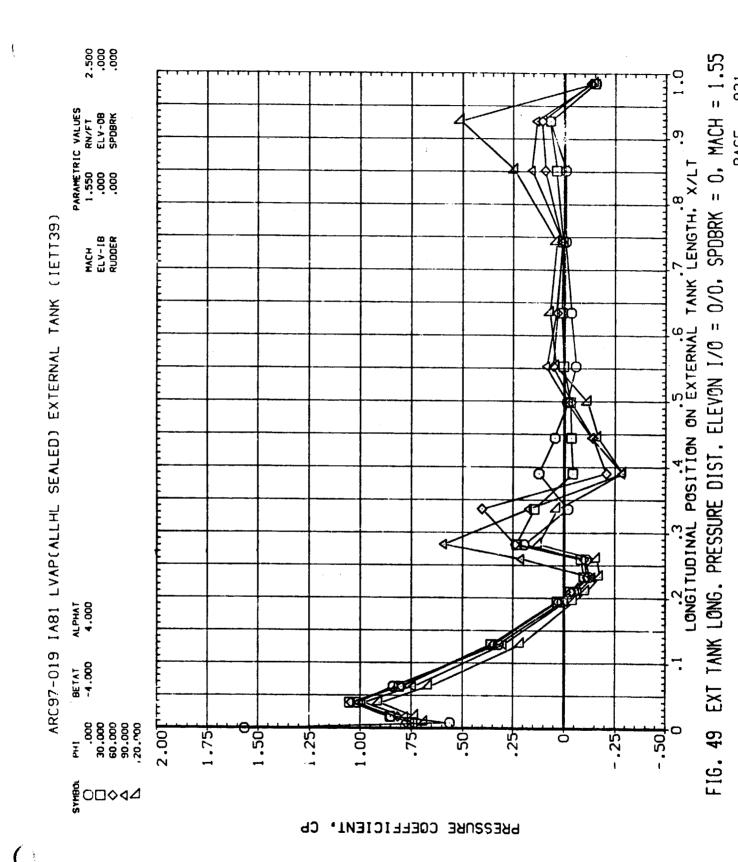
FIG. 49 EXT TANK LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MAC. = 1 53

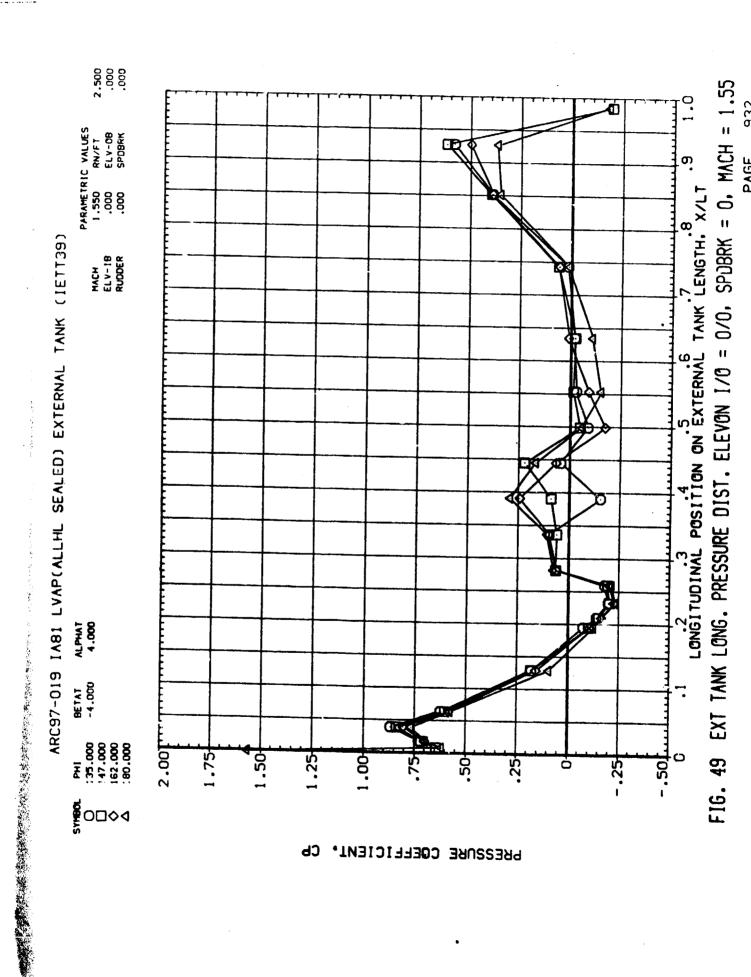


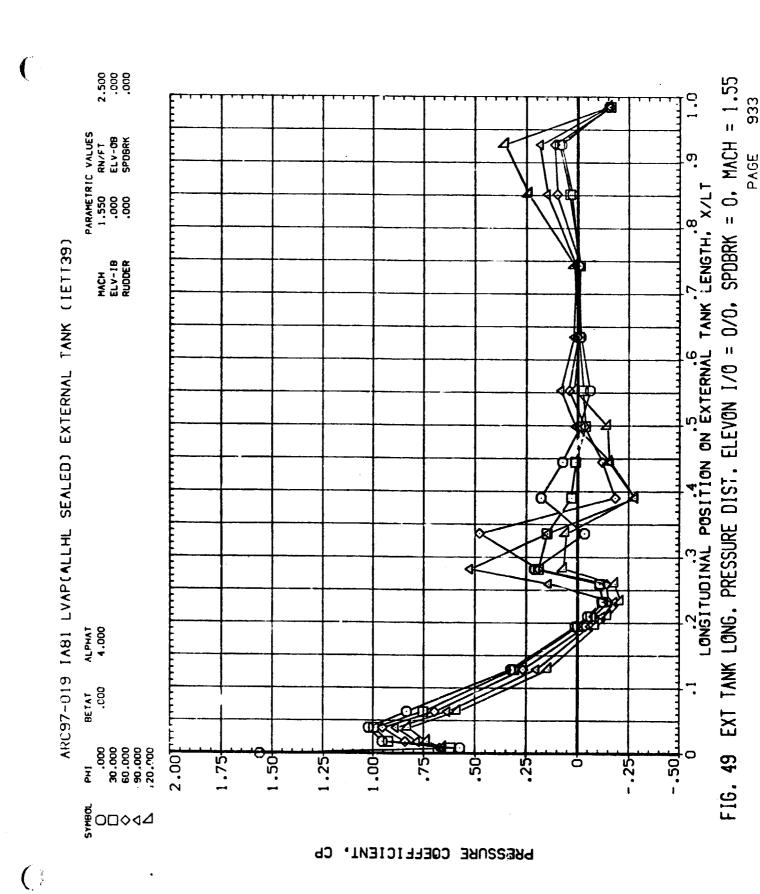
2.500 .000 FIG. 49 EXT TANK LONG. PRESSURE DIST. ELEVON I/O = 0/0. SPDBRK = 0. MACH = 1.55 PARAMETRIC VALVES 1.550 RN/FT .000 ELV-08 .2 .3 .4 .5 .6 .7 .8 LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH, X/LT ARC97-019 IA81 LVAP(ALLHL SEALED) EXTERNAL TANK (IETT39) MACH ELV-18 RUCOER ALPHAT .000 BETAT 6.000 #1 .00.00.000 .00.000 .00.000 .00.000 2.00F 1.75 1.25 1.50 1.00 -.25 -.50

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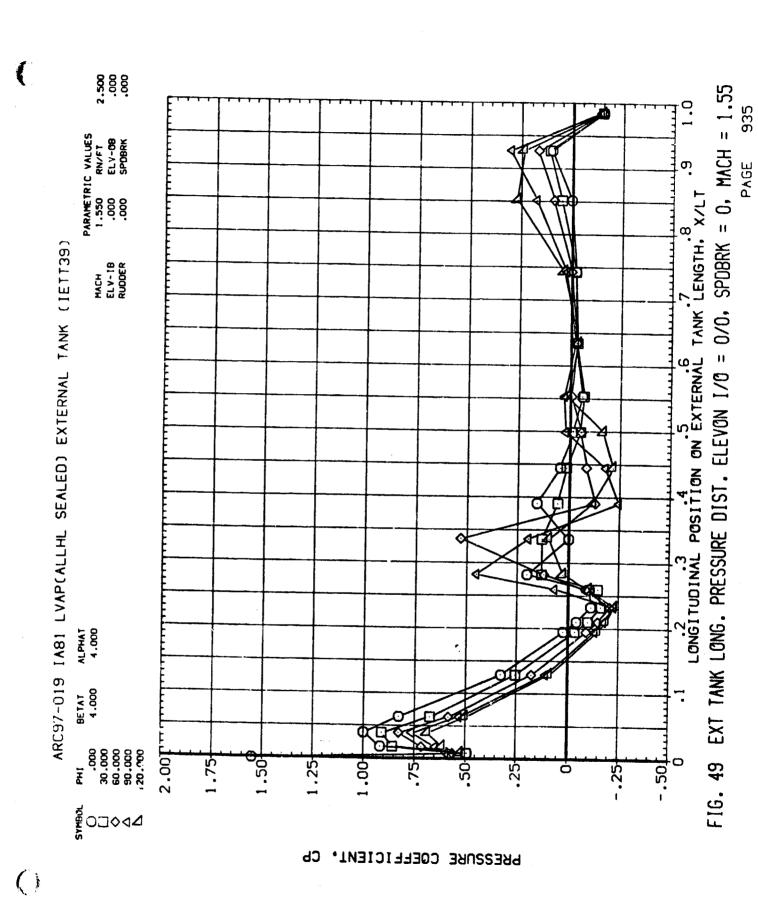


2.500 .000 PARAMETRIC VALUES
1.550 RN/FT
.000 ELV-0B
.000 SP0BRK ARC97-019 1A81 LVAP(ALLHL SEALED) EXTERNAL TANK (IETT39) MACH ELV-18 RUDDER ALPHAT 4.000 BE TAT .000 PHI :35.000 :47.000 :62.000 2.00F 1.75 50 .25 8 <u>S</u> .25 **§** ○□ ◇ △ PRESSURE COEFFICIENT.

FIG. 49 EXT TANK LONG. PRESSURE DIST. ELEVON I/O = 0/0. SPOBRK = 0, MACH = 1.55 LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH: X/LT

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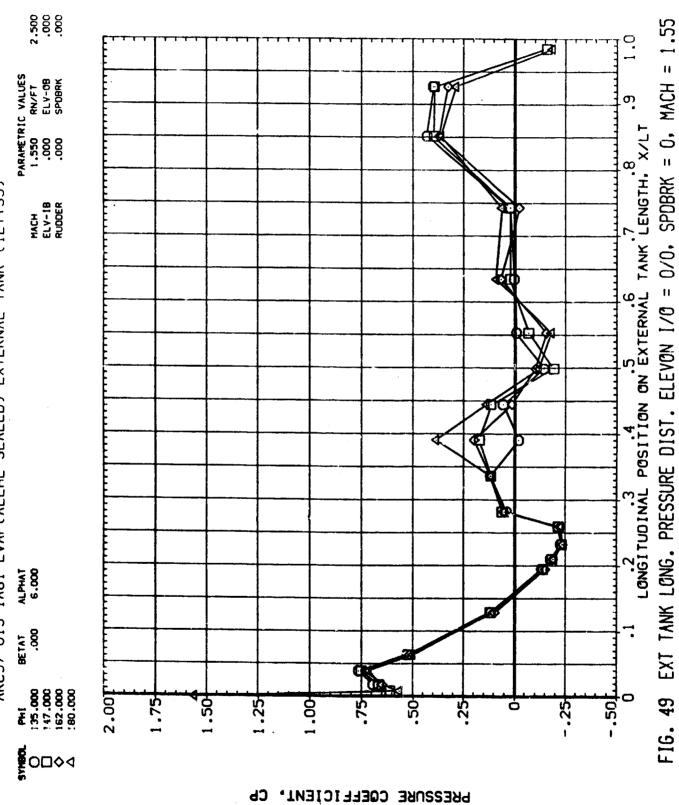


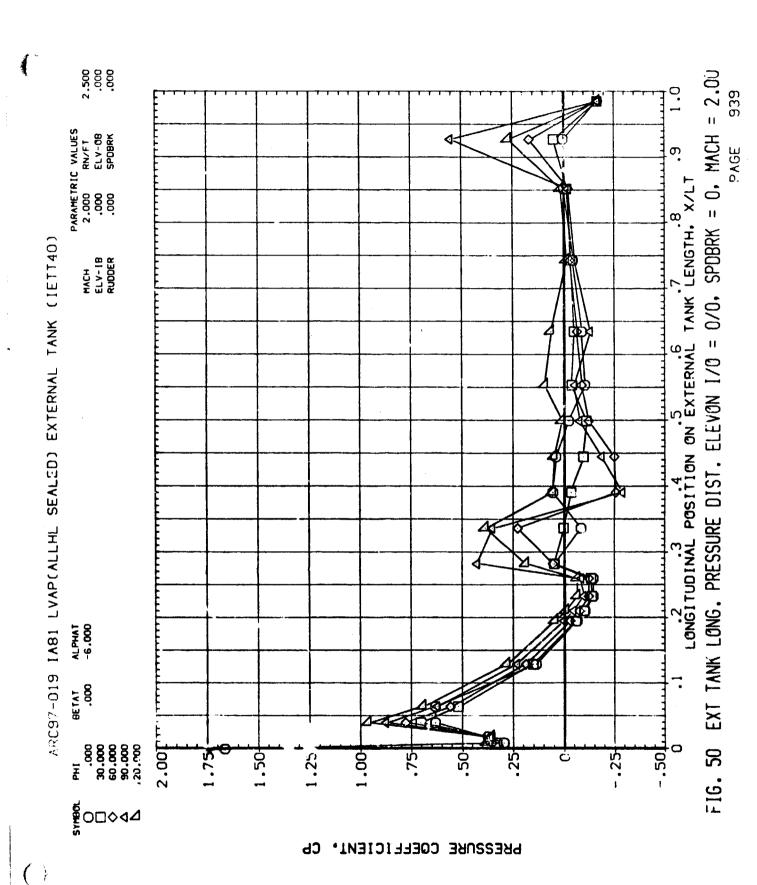
2.500 FIG. 49 EXT TANK LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 1.55 PAGE 936 PARAMETRIC VALUES
1.550 RN/FT
.000 ELV-0B
.000 SPDBRK LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH, X/LT ARC97-019 1A81 LVAP(ALLHL SEALED) EXTERNAL TANK (IETT39) MACH ELV-18 RUDDER ALPHAT 4.000 8ETAT 4.000 2.00T PHI :35.000 :47.000 :62.000 1.00 1.75 1.50 1.25 -.25 -.50 § 0□◊4

2.500 PARAMETRIC VALUES
1,550 RN/FT
.000 ELV-0B LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH. X/LT ARC97-019 IA81 LVAP(ALLHL SEALED) EXTERNAL TANK (IETT39) MACH ELV-18 RUDDER BETAT .000 74. 30.000 60.000 90.000 20.000 2.00T 1.75 -.50 .50 .25 .50

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FIG. 49 EXT TANK LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPOBRK = 0, MACH = 1.55





2.500 FIG. 50 EXT TANK LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.00 FARAMETRIC VALUES
2.000 RN/FT
.000 ELV-08 LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH, X/LT ARC97-019 IA81 LVAP(ALLHL SEALED) EXTERNAL TANK (IETT40) MACH ELV-18 RUDDER ALPHAT -6.000 .000 2.00TTT 7H1 :35.000 :47.000 :90.000 -.50 1.75 . . 50 1.25 00. 50 -.25 **§** ○□ ◊ 4 PRESSURE COEFFICIENT,

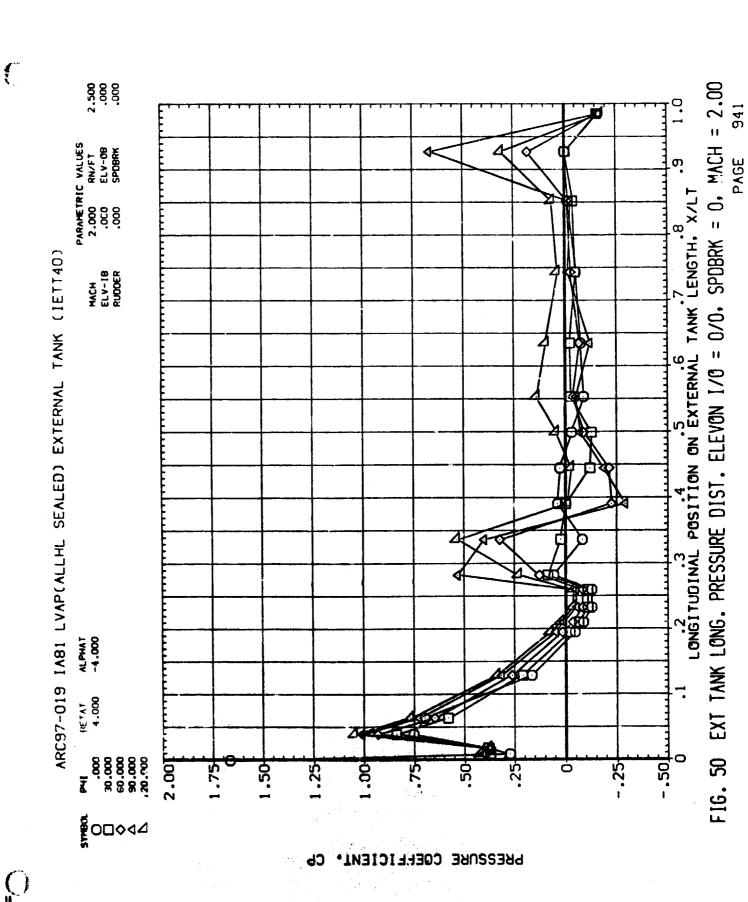
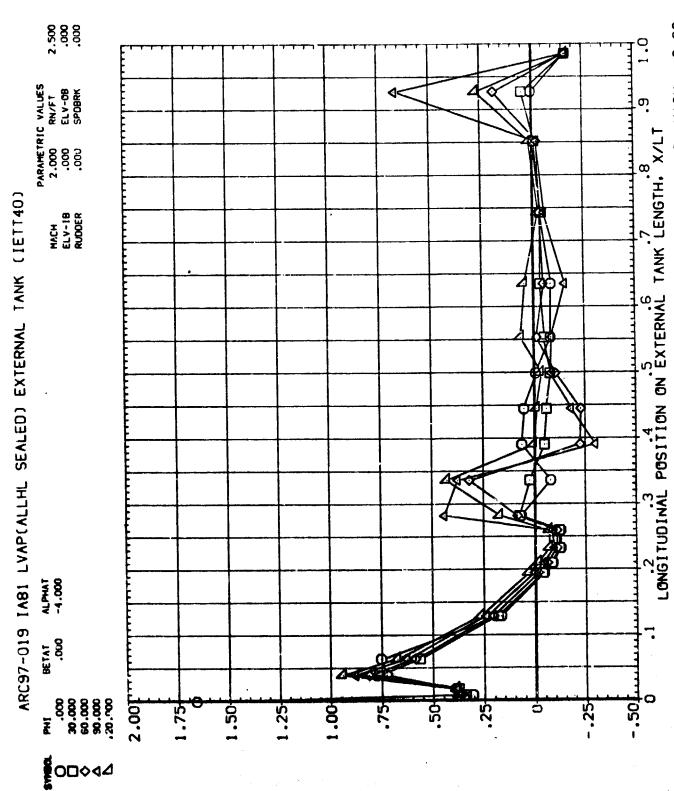


FIG. 50 EXT TANK LONG. PRESSURE DIST. ELEVON I/0 = 0/0, SPOBRK = 0, MACH = 2.00 LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH. X/LT



PRESSURE COEFFICIENT

FIG. 50 EXT TANK LONG. PRESSURE DIST. ELEVON 1/0 = 0/0, SPDBRK = 0, MACH = 2.00

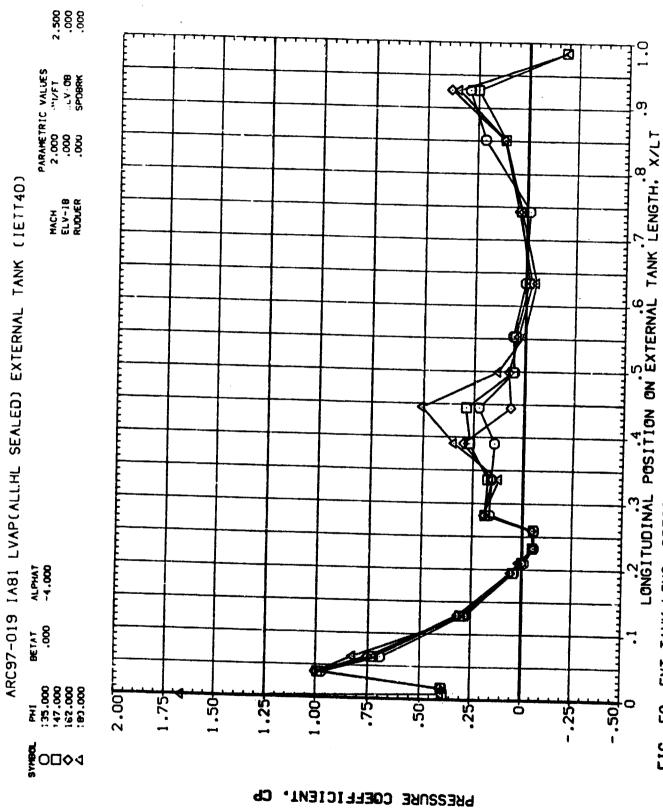
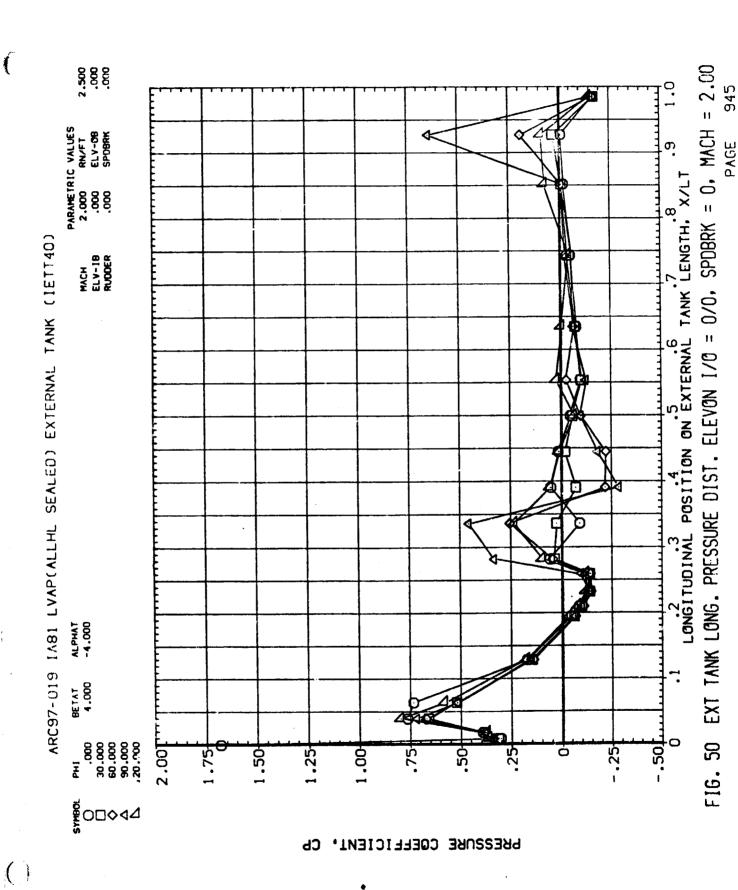


FIG. 50 EXT TANK LONG. PRESSURE DIST. ELEVON 1/0 = 0/0, SPDBRK = 0, MACH = 2.00

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2.500. 900. 900. EXT TANK LONG. PRESSURE DIST. ELEVON 1/0 = 0/0, SPOBRK = 0, MACH = 2.00 PARAMETRIC VALUES 2.000 RN/FT .000 ELV-08 LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH, X/LT .9 ARC97-019 IA81 LVAP(ALLHL SEALED) EXTERNAL TANK (IETT40) MACH ELV-18 RUDDER ALPHAT -4.000 8ETAT 4.000 2.00T PHI :35.000 :47.000 162.000 :80.000 F16.50 1.75 1.25 1.50 8. 50 -.25 -.50 PRESSURE COEFFICIENT,

2. 8. 8. 8. 8. 8. 8. 8. 8. PARAMETRIC VALUES 2.000 RN/FT .000 ELV-08 .000 SPDBRK LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH. X/LT ARC97-019 IA81 LVAP(ALLHL SEALED) EXTERNAL TANK (IETT40) MACH ELV-18 RUDOER ALPHAT BETAT -6.000 PHI 30,000 60,000 90,000 90,000 2.00T .75 .25 S. ₽. 0. -.50 PRESSURE COEFFICIENT,

FIG. 50 EXT TANK LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.00

2.500 PARAMETRIC VALUES 2.000 RN/F1 .000 ELV-08 **Q** ARC97-019 IA81 LVAP(ALLHL SEALED) EXTERNAL TANK (IETT40) MACH EL V - 18 RUDOÉR ALPHAT .000 BETAT -6.000 741 135.000 147.000 162.000 : 80.000 2.00T .75 1.50 1.25 -.25

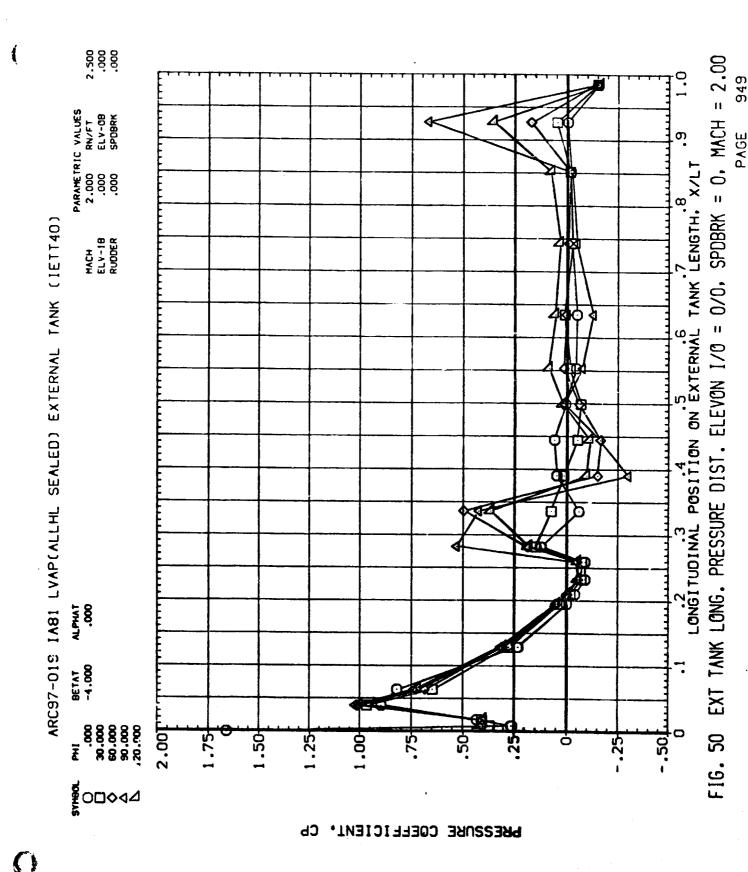
EXT TANK LONG. PRESSURE DIST. ELEVON 1/0 = 0/0. SPDBRK = 0. MACH = 2.00

FIG. 50

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LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH, X/LT

PRESSURE COEFFICIENT,

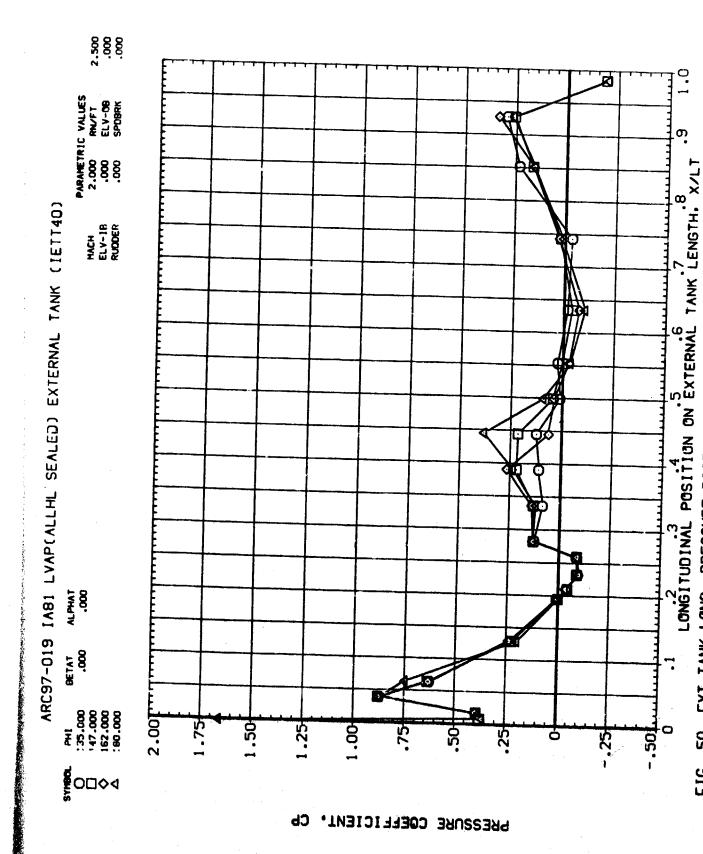


2.500 .000 .000 PARAMETRIC VALUES 2.000 RN/FT .000 ELV-08 ARC97-019 IA81 LVAP(ALLHL SEALED) EXTERNAL TANK (IETT47) MACH ELV-18 RUDDER ALPHAT .000 9£7A7 -4.000 2.00T PHI :35.000 :47.000 :82.000 1.75 8 0.1 -.50 **§**O□◊4 PRESSURE COEFFICIENT.

EXT TANK LONG. PRESSURE DIST. ELEVON 1/0 = 0/0, SPDBRK = 0, MACH = 2.00 LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH, X/LT FIG. 50

2.500 FIG. 50 EXT TANK LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.00 PARAMETRIC VALUES
2.000 RN/FT
.000 ELV-08
.000 SP03RK LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH, X/LT ARC97-019 IA81 LVAP(ALLHL SEALED) EXTERNAL TANK (IETT40) MACH ELV-18 RUDDER ALPHAT BETAT ...000 0 30.000 60.000 90.000 2.00T 1.75 1.50 1.25 .75 -.25 1.00

PRESSURE COEFFICIENT

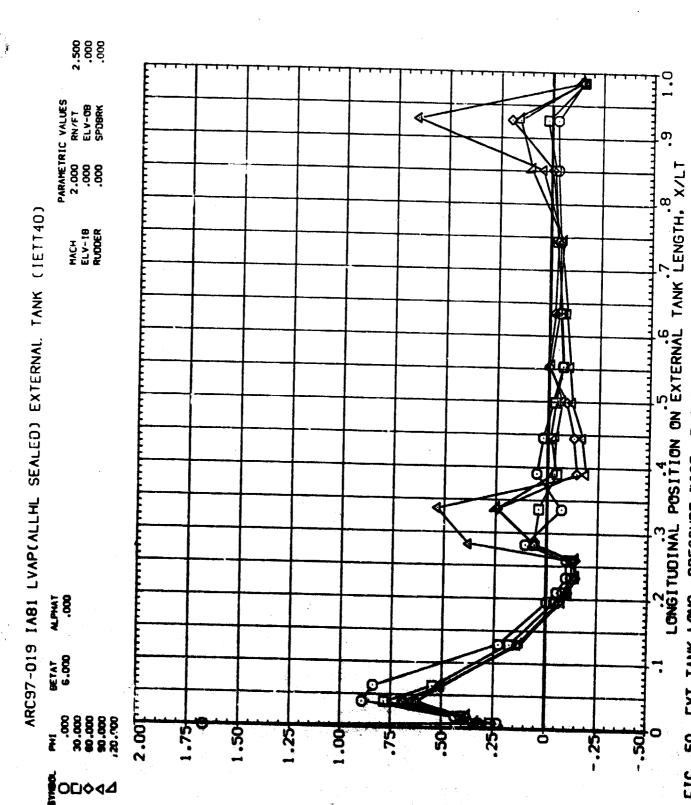


EXT IANK LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.00 FIG. 50

2.50 FIG. 50 EXT TANK LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPOBRK = 0, MACH = 2.00 PARAMETRIC VALUES
2.000 RN/F1
.000 ELV-08. **⋖**< LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH. X/LT ARC97-019 IA81 LVAP(ALLHL SEALED) EXTERNAL TANK (IETT40) MACH ELV-18 RUDDER ALPHAT .000 8ETAT 4.000 PH1 30.000 50.000 50.000 20.000 2.00T 75 -.50 .25 .50 <u></u> PRESSURE COEFFICIENT,

2.500 .000 .000 PARAMETRIC VALUES 2.000 RN/FT .000 ELY-08 ARC97-019 IA81 LVAP(ALLHL SEALED) EXTERNAL TANK (IETT40) MACH ELV-18 RUDDER ALPHAT .000 **9ETAT 4.000** PHI 33,000 162,000 80,000 2.00F Š. 8:0

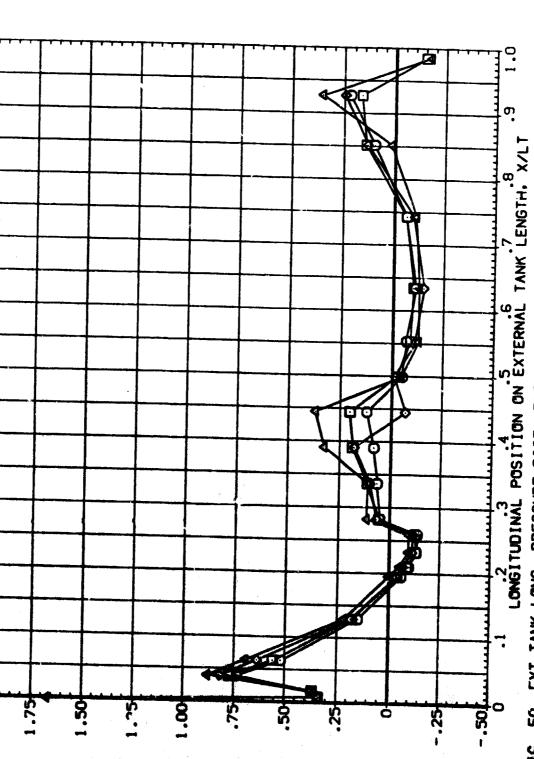
EXT TANK LONG. PRESSURE DIST. ELEVON 1/0 = 0/0, SPDBRK = 0, MACH = 2.00 954 LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH. X/LT F16.50



PRESSURE COEFFICIENT, CP

EXT TANK LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPOBRK = 0, MACH = 2.00 F16.50

% % % % PARAMETRIC VALUES 2.000 RN/FT .000 ELV-08 SEALED) EXTERNAL TANK (IETT40) MACH ELV-1B RUDOER ARC97-019 IA81 LVAPCALLHL 6.000 2.00T 1.75 8. 0000

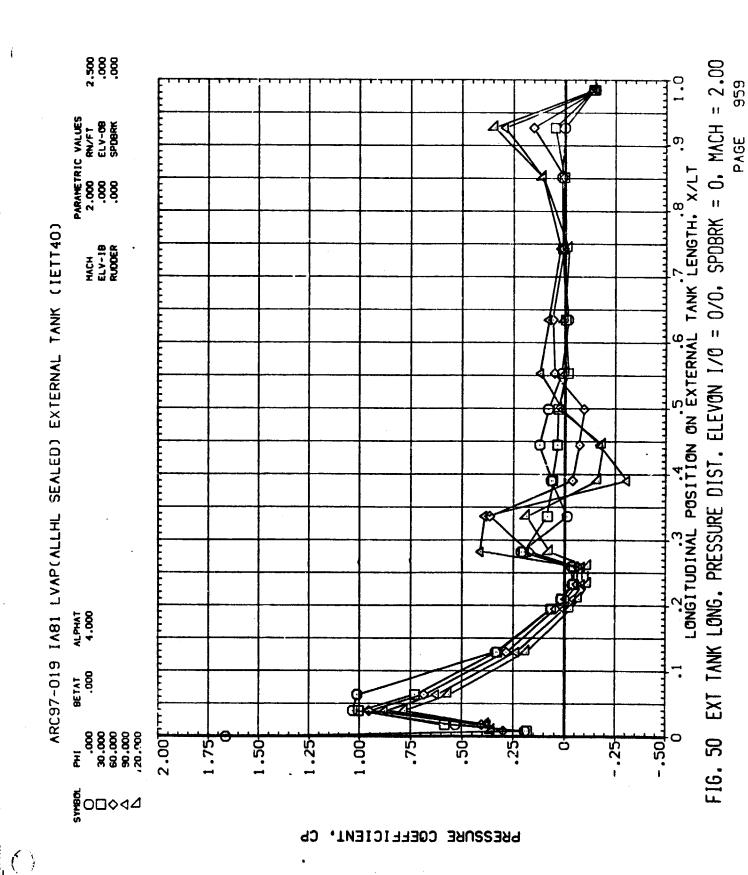


EXT TANK LONG. PRESSURE DIST. ELEVON 1/0 = 0/0, SPDBRK = 0, MACH = 2.00 F16. 50

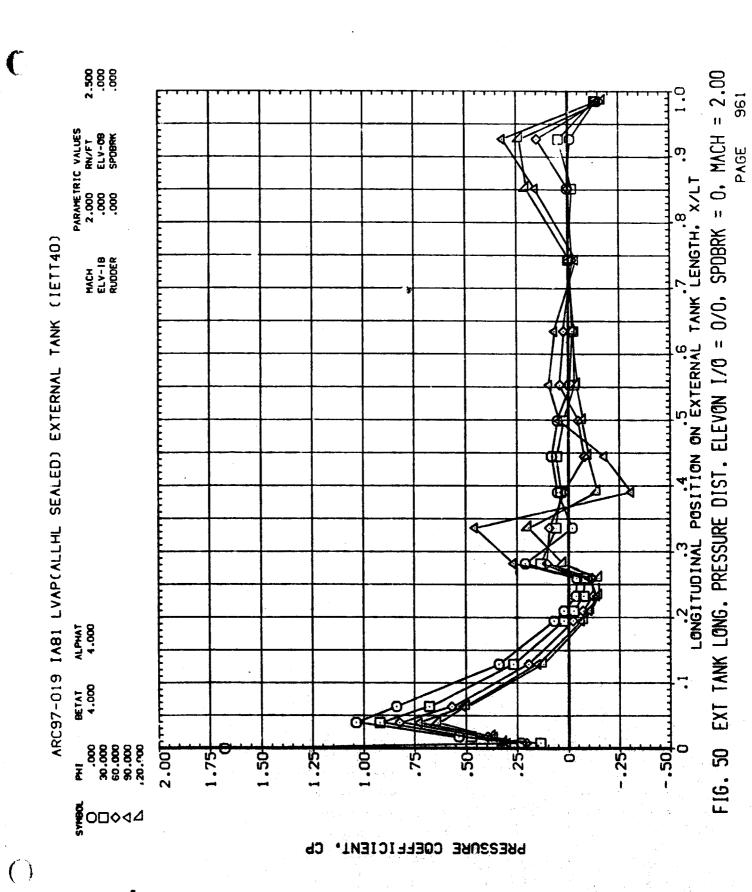
(2.00 0.00 0.00 0.00 FIG. 50 EXT TANK LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.00 2.000 RN/FT .000 ELV-08 .000 SP08RK LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH. X/LT ARC97-019 IA81 LVAP(ALLHL SEALED) EXTERNAL TANK (IETT40) MACH ELV-18 RUDOER ALPHAT 4.000 8£TAT -4,000 30,000 90,000 90,000 20,000 2.00F .25 .75 <u>В</u> S -.25 -.50 **E**O□◊4△ PRESSURE COEFFICIENT,

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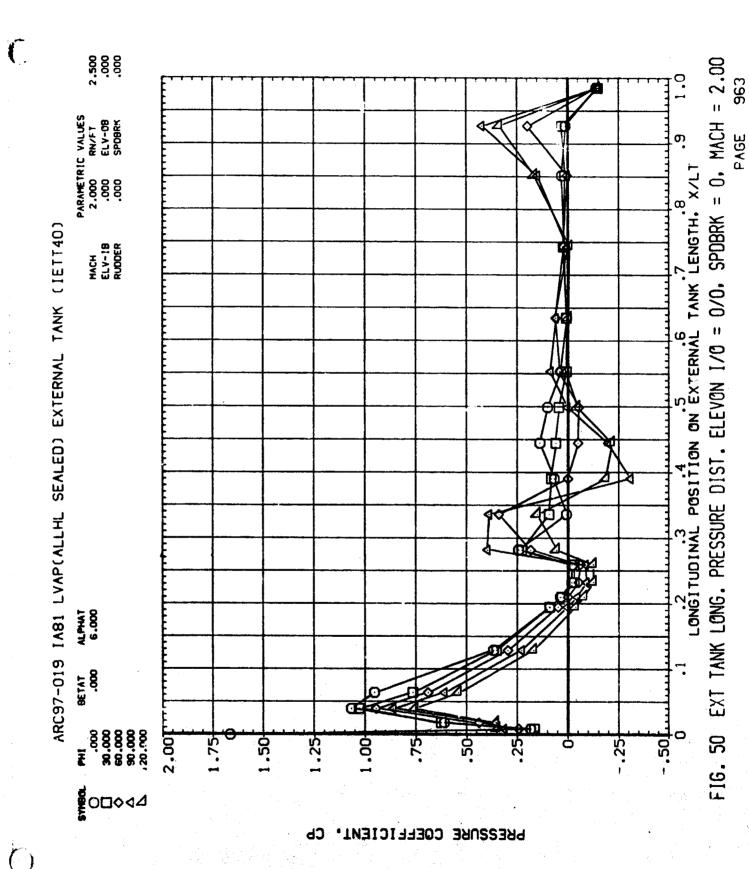


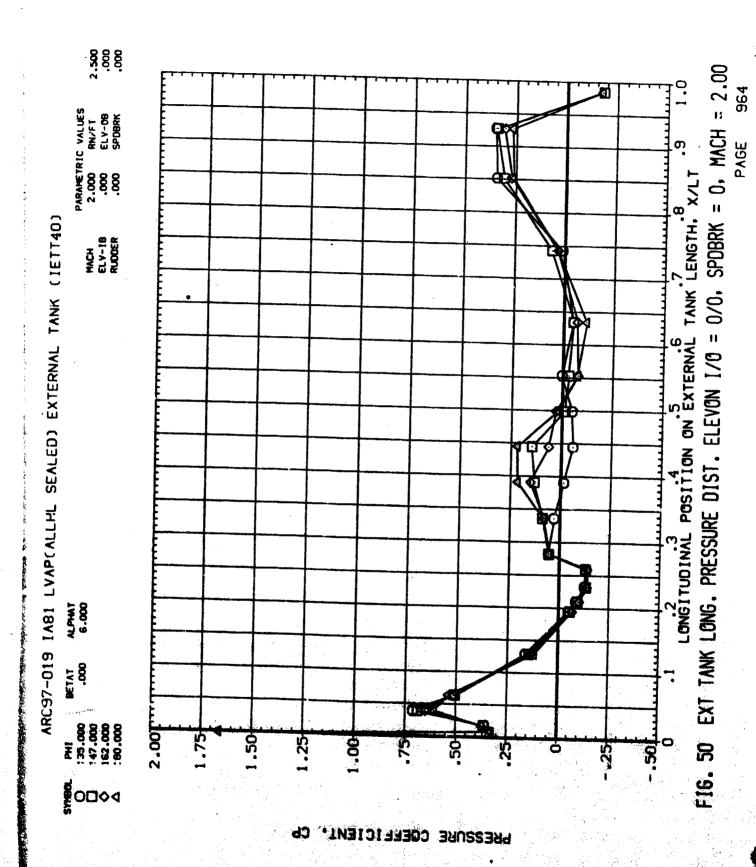
2.500 000.000 FIG. 50 EXT TANK LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.00 PARAMETRIC VALUES 2.000 RN/FT .000 ELV-08 LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH, X/LT ARC97-019 IA81 LVAP(ALLML SEALED) EXTERNAL TANK (IETT40) MACH ELV-18 RUDDER ALPHAT 4.000 .000 35.000 147.000 162.000 180.000 2.00T 1.75 1.25 **9.** 1 -.25 **№**0□◊4 PRESSURE COEFFICIENT.

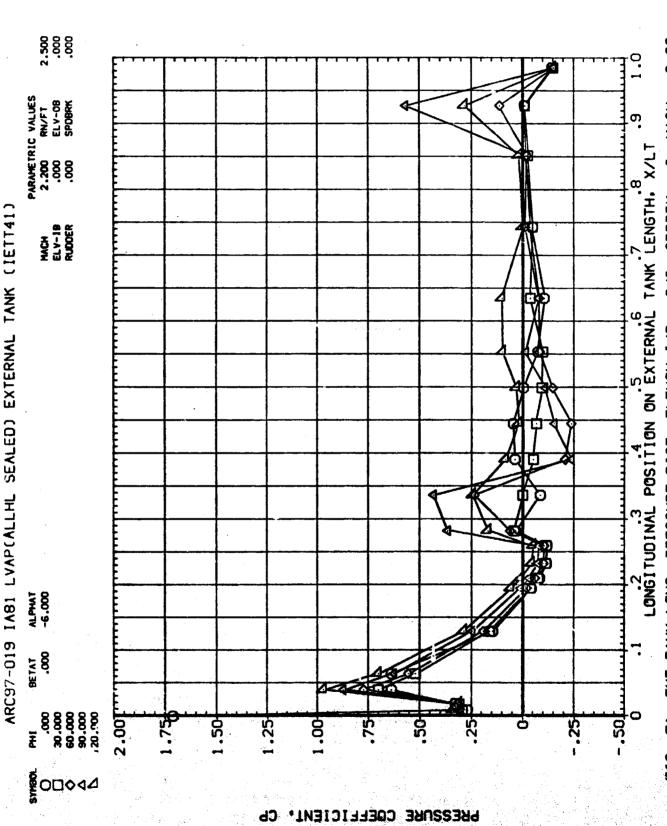


2. 98. 98. 98. 98. PARAMETRIC VALUES 2.000 RN/FT .000 ELV-08 ARC97-019 IA81 LVAP(AL:HL SEALED) EXTERNAL TANK (IETT40) MACH ELV-18 RUDDER ALPHAT 4.000 **BETAT** 4.000 PHI 135.000 162.000 2.00T 8

EXT TANK LONG. PRESSURE DIST. ELEVON 1/0 = 0/0. SPDBRK = 0. MACH = 2.00 LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH. X/LT FIG. 50







EXT TANK LONG. PRESSURE DIST. ELEVON I/0 = 0/0, SPDBRK = 0, MACH = 2.20 PAGE F16. 51

ARC97-019 IA81 LVAP(ALLHL SEALED) EXTERNAL TANK (IETT41)

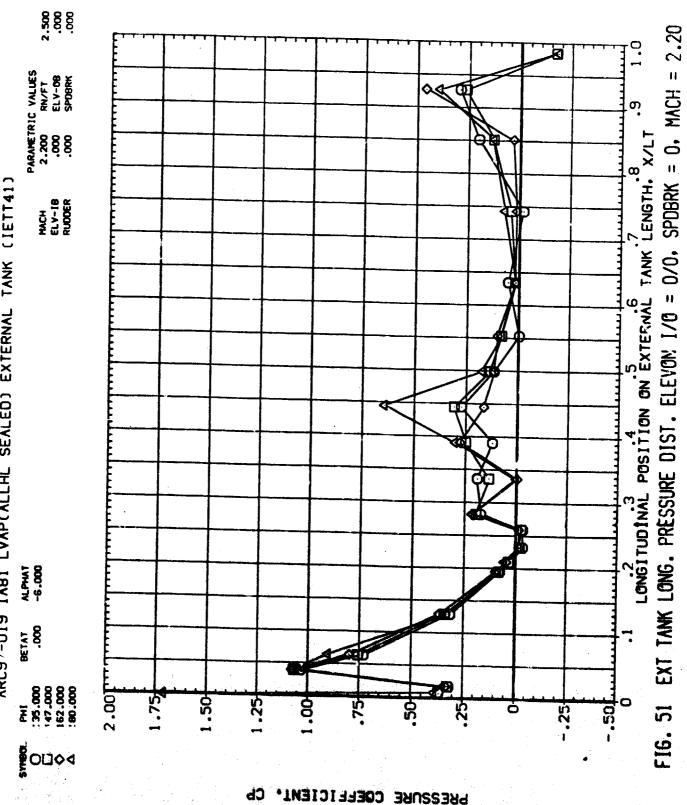
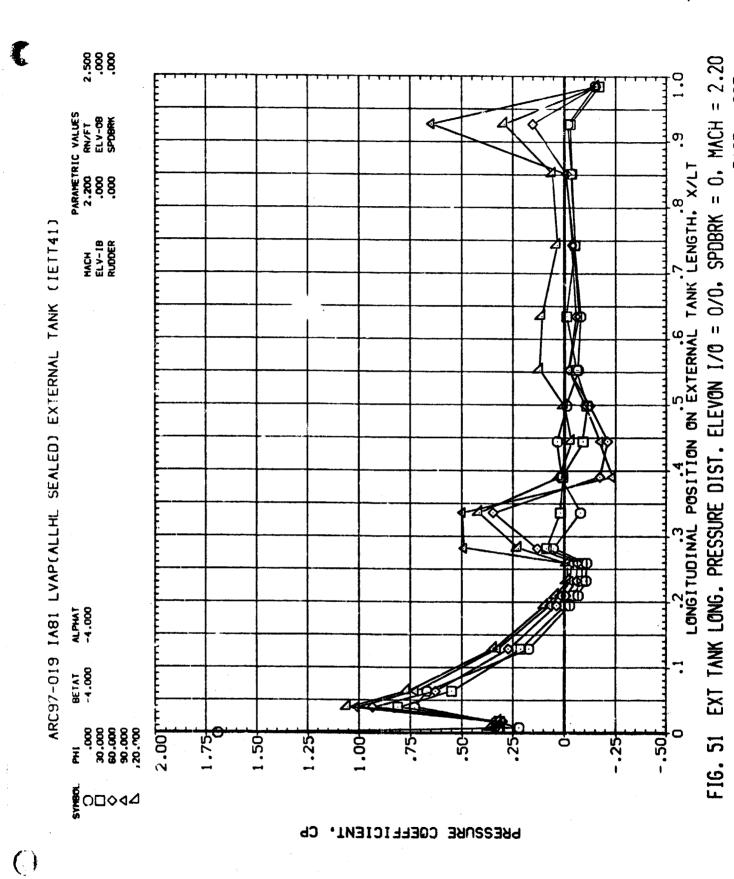


FIG. 51



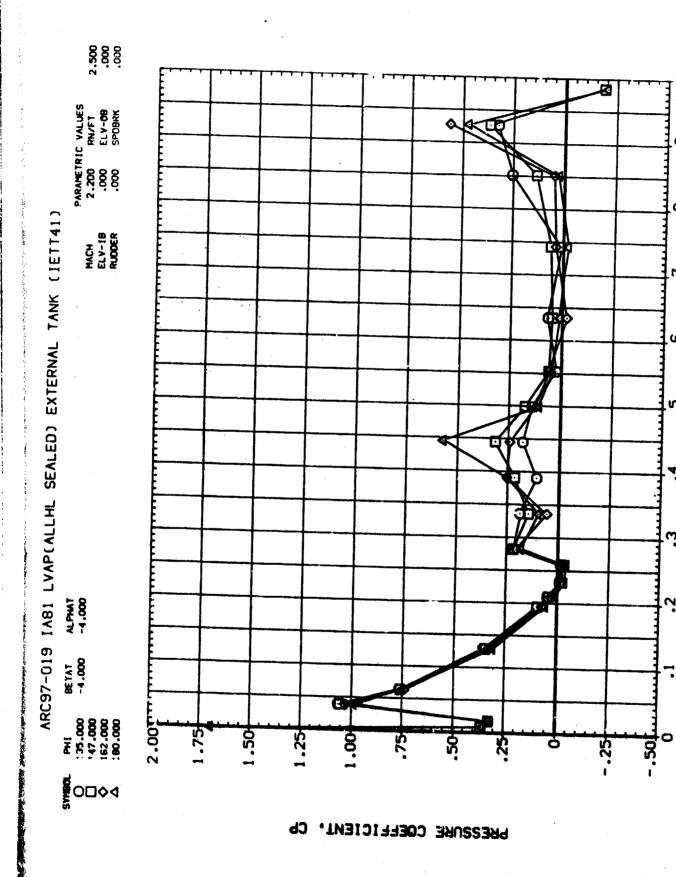


FIG. 51 EXT TANK LONG. PRESSURE DIST. ELEVON 1/0 = 0/0, SPDBRK = 0, MACH = 2.20 LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH, X/LT

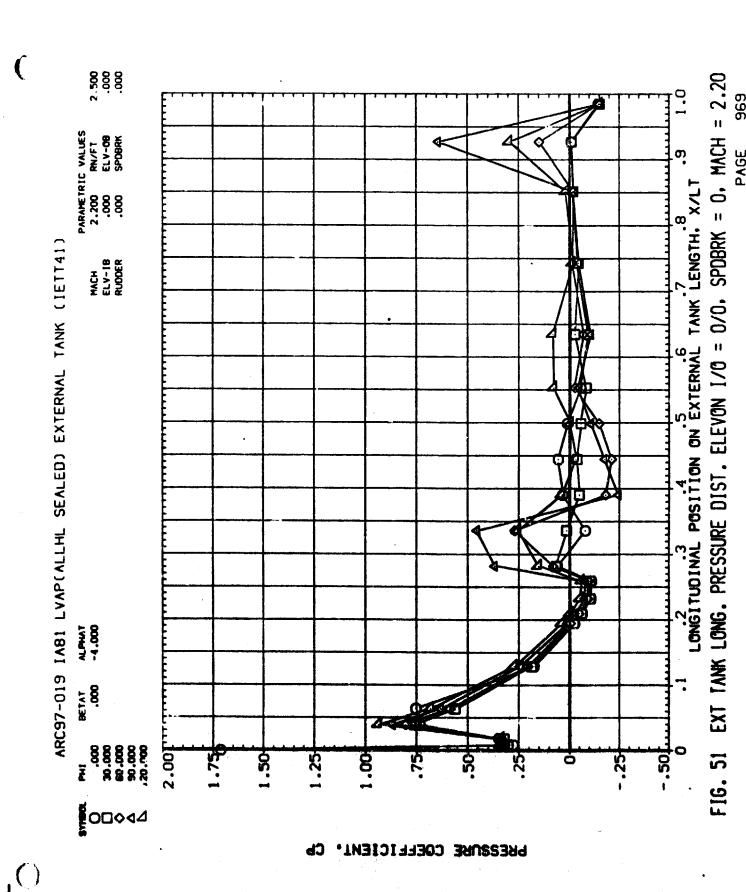


FIG. 51 EXT TANK LONG. PRESSURE DIST. ELEVON I/0 = 0/0. SPDBRK = 0, MACH = 2.20 LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH. X/LT

EX1 TANK LONG. PRESSURE DIST. ELEVON 1/0 = 0/0, SPOBRK = 0, MACH = 2.20

FIG. 51

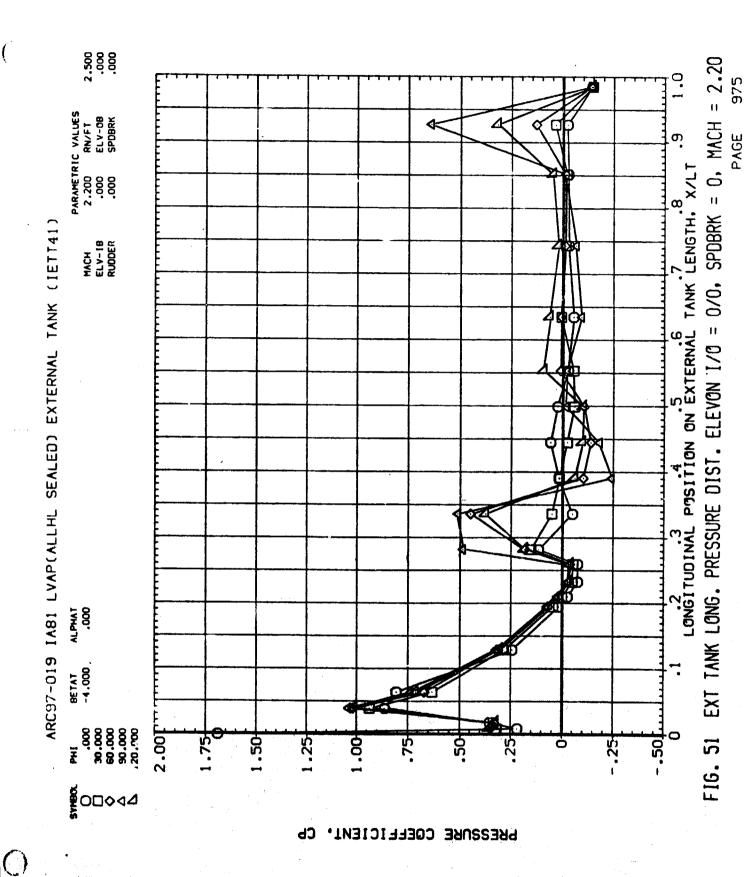
2.500 EXT TANK LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.20 PARAMETRIC VALUES 2.200 RN/FT .000 ELV-08 LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH. X/LT ARC97-019 IA81 LVAP(ALLHL SEALED) EXTERNAL TANK (IETT41) MACH ELV-18 RUDOSR ALPHAT -4.000 BETAT 4.000 2.00T PH1 :35.000 :47.000 162.000 1.75 1.25 1.50 .00 FIG. 51 ¥ O□◊⊲ PRESSURE COEFFICIENT,

2.500 .000 PARAMETRIC VALUES 2.200 RN/FT .000 ELV-08 ONGITUDINAL POSITION ON EXTERNAL TANK LENGTH: X/LT ARC97-019 IA81 LVAP(ALLHL SEALED) EXTERNAL TANK (IETT41) MACH ELV-18 RUODER ALPHAT. BETAT -6.000 30.000 80.000 90.000 30.000 2.00T .75 1.50 1.25 , 00° 75 -.25 S. -.50 PRESSURE COEFFICIENT,

FIG. 51 EXT TANK LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.20

2.500 0 .1 LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH: x/LT .9 1.0 FIG. 51 EXT TANK LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPOBRK = 0. MACH = 2.20 PARAMETRIC VALUES 2.200 RN/FT .000 ELV-08 ARC97-019 IABI LVAP(ALLHL SEALED) EXTERNAL TANK (JETT41) MACH ELV-18 RUDDER ALPHAT 000 BETAT -6.000 PHI :35.000 147.000 162.000 2.00T 1.75 -.50 **№**0□◊4 PRESSURE COEFFICIENT,

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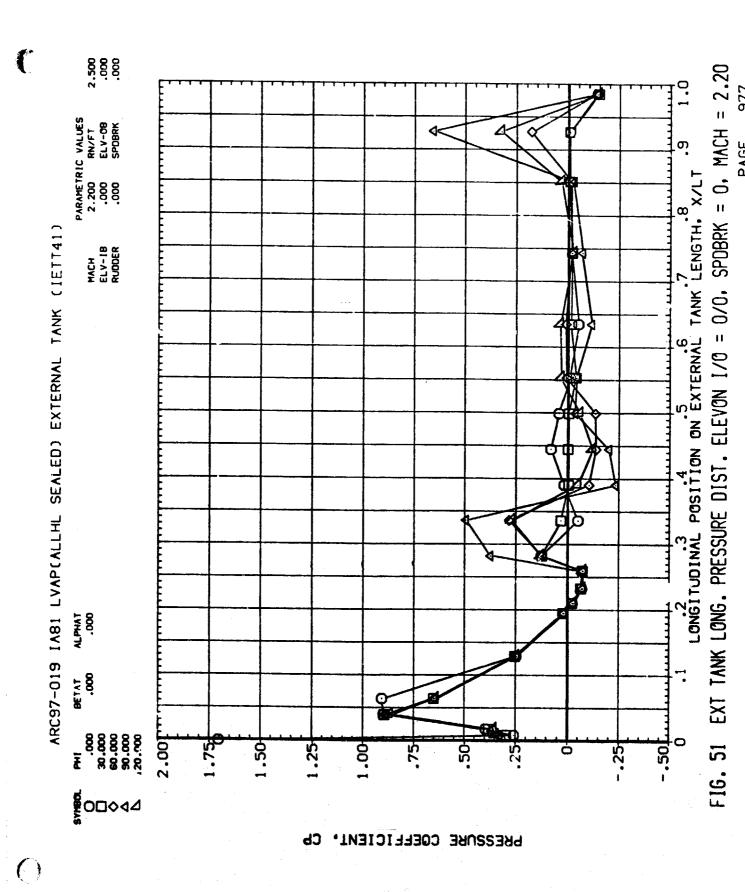


2.500 .000 .000 2.200 RN/FT .000 ELV-08 ARC97-015 IA81 LVAP(ALLHL SEALED) EXTERNAL TANK (IETT41) MACH ELV-18 RUDDER ALPHAT BETAT -4.000 2.00Tm PHI 135.000 147.000 162.000 **E**O□◊4

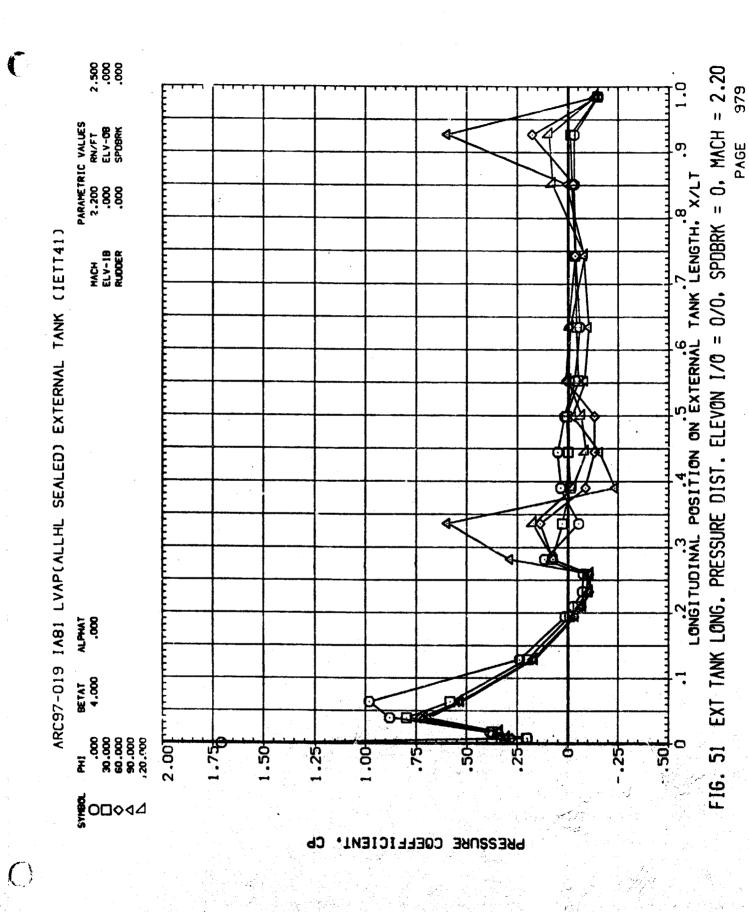
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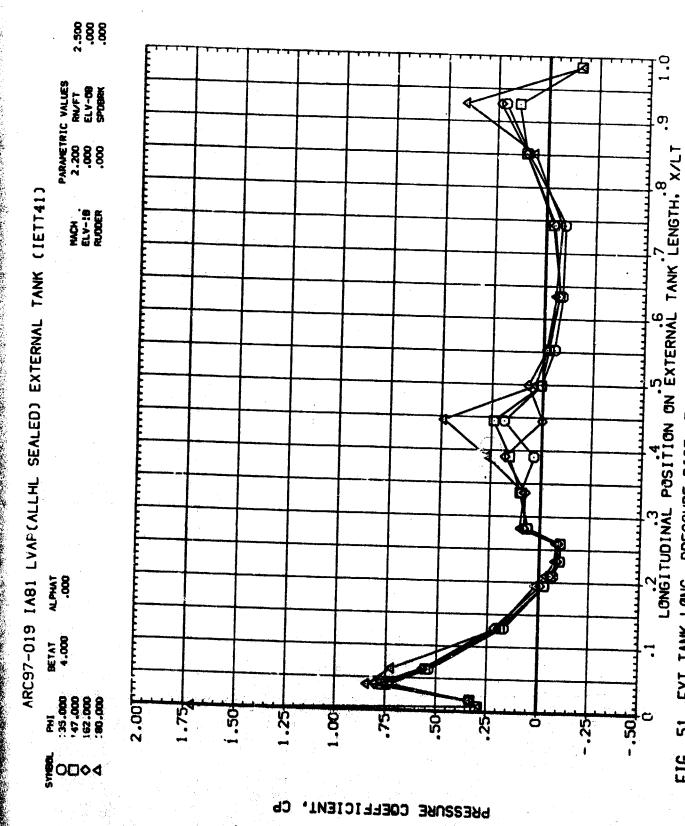
FIG. 51 EXT TANK LONG. PRESSURE DIST. ELEVON I/O = 0/0. SPOBRK = 0. MACH = 2.20 LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH, X/LT

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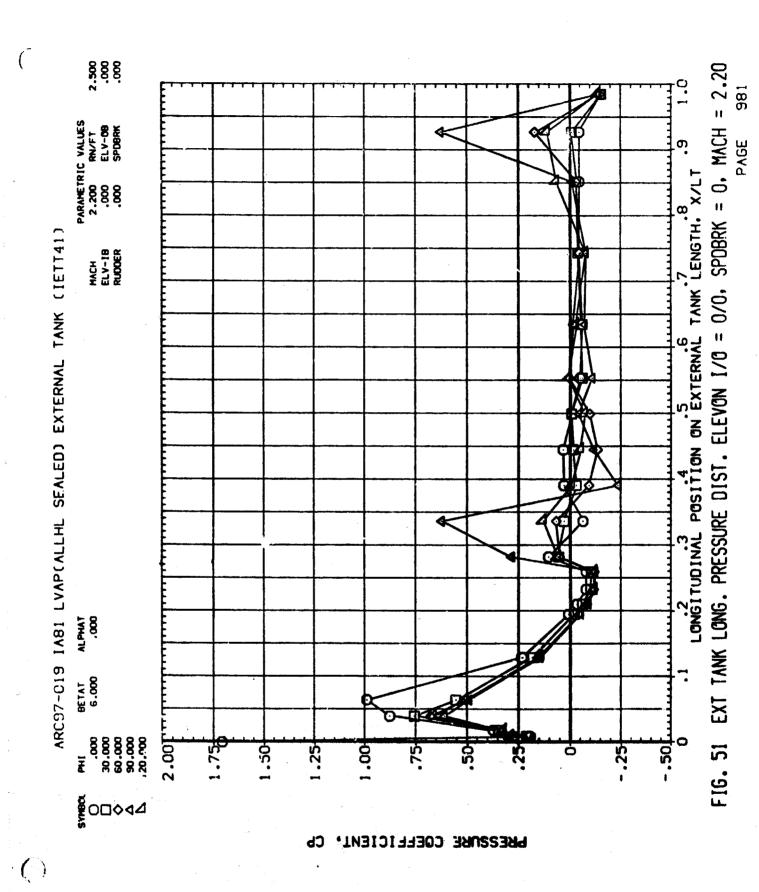
2.500 FIG. 51 EXT TANK LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.20 PARAMETRIC VALUES 2.200 RN/FT .000 ELV-08 LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH. X/LT ARC97-019 IA81 LVAP(ALLHL SEALED) EXTERNAL TANK (IETT41) MACH ELV-18 RUDDER ALP447 8ETAT 35.000 347.000 162.000 180.000 2.00T .50 ģ -.50 **§**O□◊4 PRESSURE COEFFICIENT

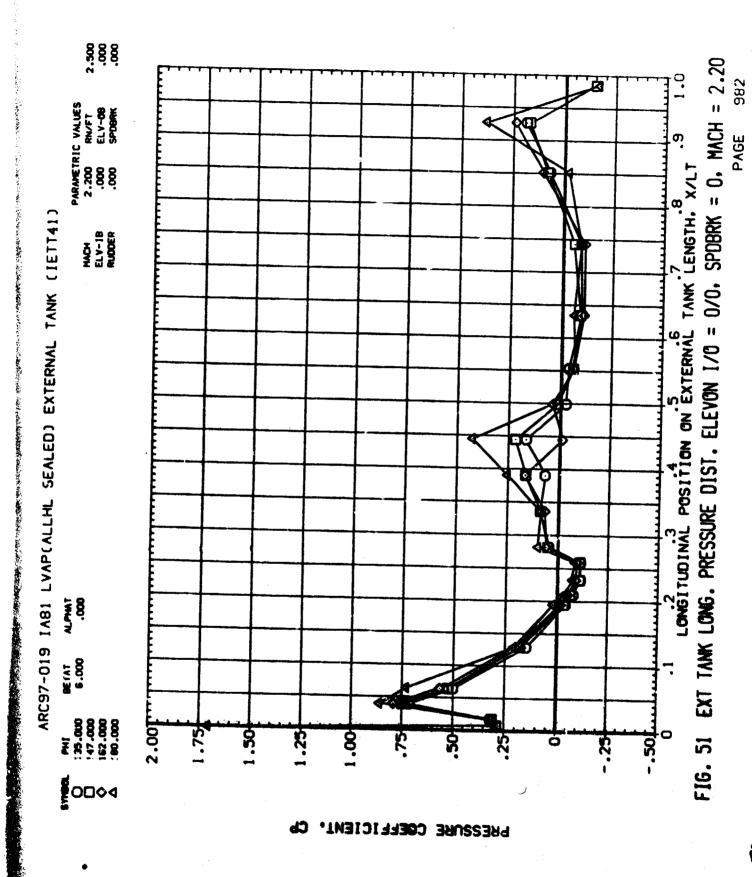


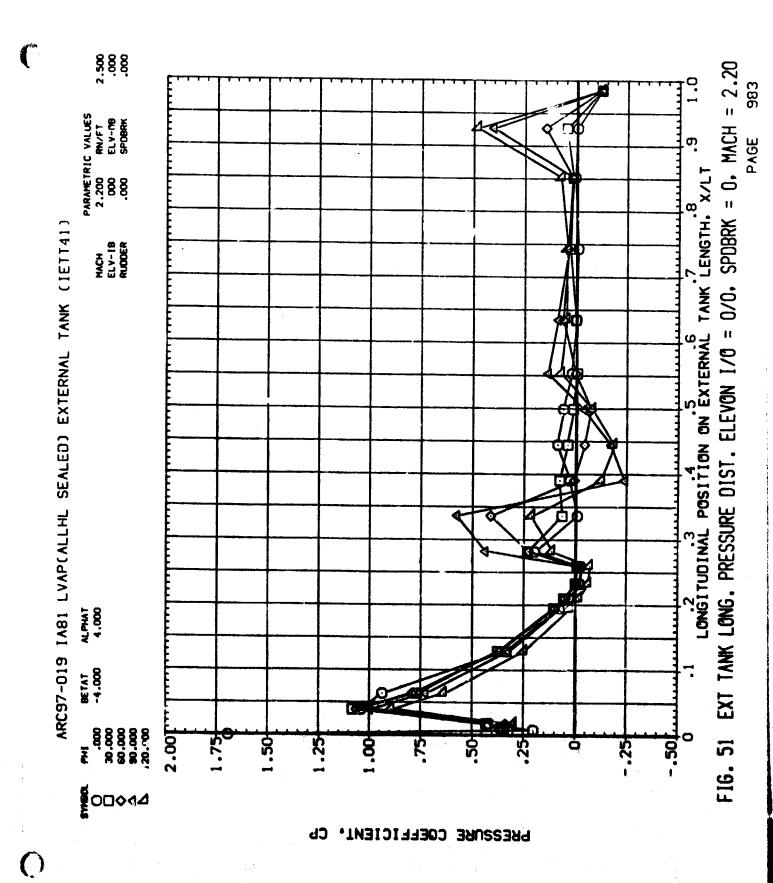


EXT TANK LONG. PRESSURE DIST. ELEVON 1/0 = 0/0, SPOBRK = 0, MACH = 2.20 F16. 51

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2.500 .000 .000 FIG. 51 EXT TANK LONG. PRESSURE DIST. ELEVON I/O = 0/0. SPDBRK = 0. MACH = 2.20 PARAMETRIC VALUES 2.200 RN/FT .000 ELV-08 .000 SPDBRK LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH, X/LT ARC97-019 IA81 LVAP(ALLML SEALED) EXTERNAL TANK (IETT41) MACH ELV-18 RUDOER ALPHAT 4.000 -4.000 2.00FT 1.75 1.50 -.25 **60**□◊4 PRESSURE COEFFICIENT,

COEFFICIENT,

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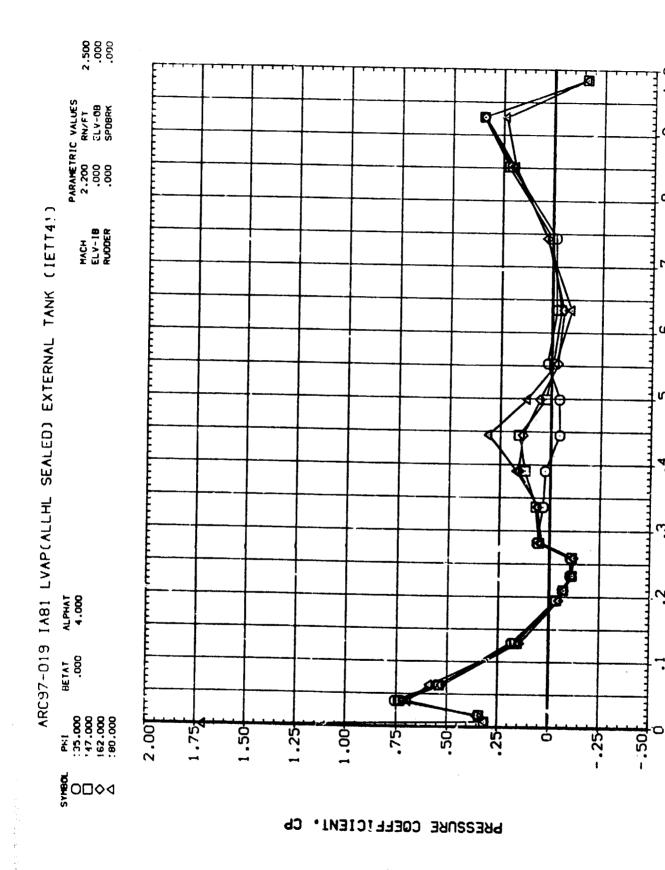
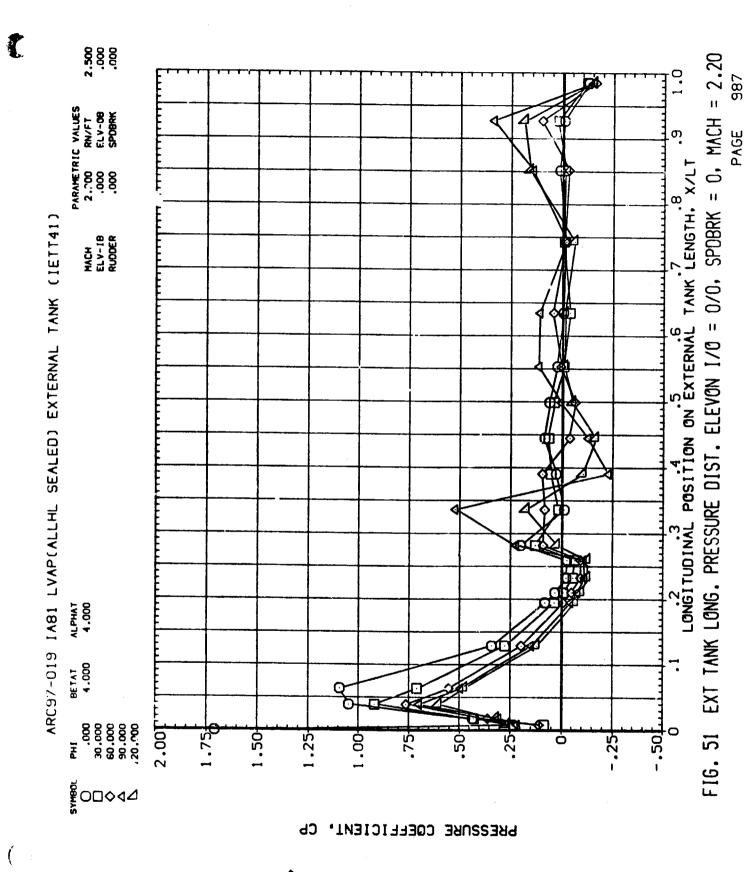


FIG. 51 EXT TANK LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.20 LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH: X/LT



2.50 00.00 00.00 LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH. x/LT .9 1.0 EXT TANK LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPOBRK = 0, MACH = 2.20 PARAMETRIC VALUES 2.200 RN/F1 .000 ELV-08 ARC37-019 IA81 LVAP(ALLHL SEALED) EXTERNAL TANK (IETT41) MACH ELV-18 RUDDER Consider the second sec 4.000 4.000 FH1 :35.000 :47.000 :162.000 2.00T 1.75 1.50 1.25 1.00 FIG. 51 -.25 -.50 **§**O□◊⊲ PRESSURE COEFFICIENT,

2.500 PARAMETRIC VALUES 2.200 RN/FT .000 ELV-08 .000 SPDBRK LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH. X/LT ARC97-019 IA81 LVAP(ALLHL SEALED) EXTERNAL TANK (IETT41) HACH ELV-18 RUDDER ALPHAT 6.000 BETAT .000 2.00FT 30.000 80.000 90.000 90.000 - 50 -1.25 1.00

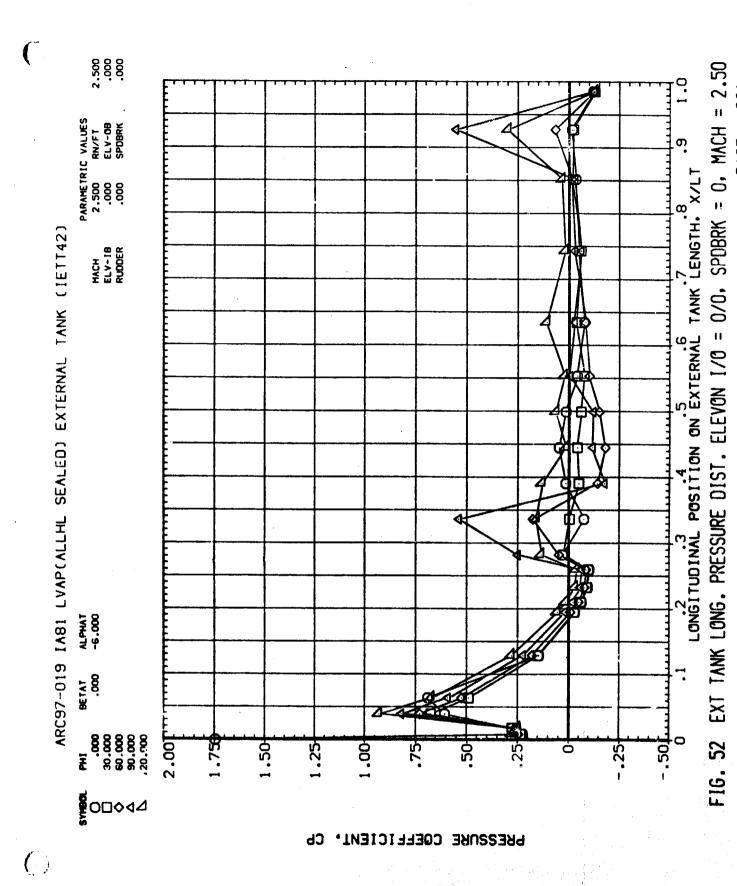
PRESSURE COEFFICIENT,

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FIG. 51 EXT TANK LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.20

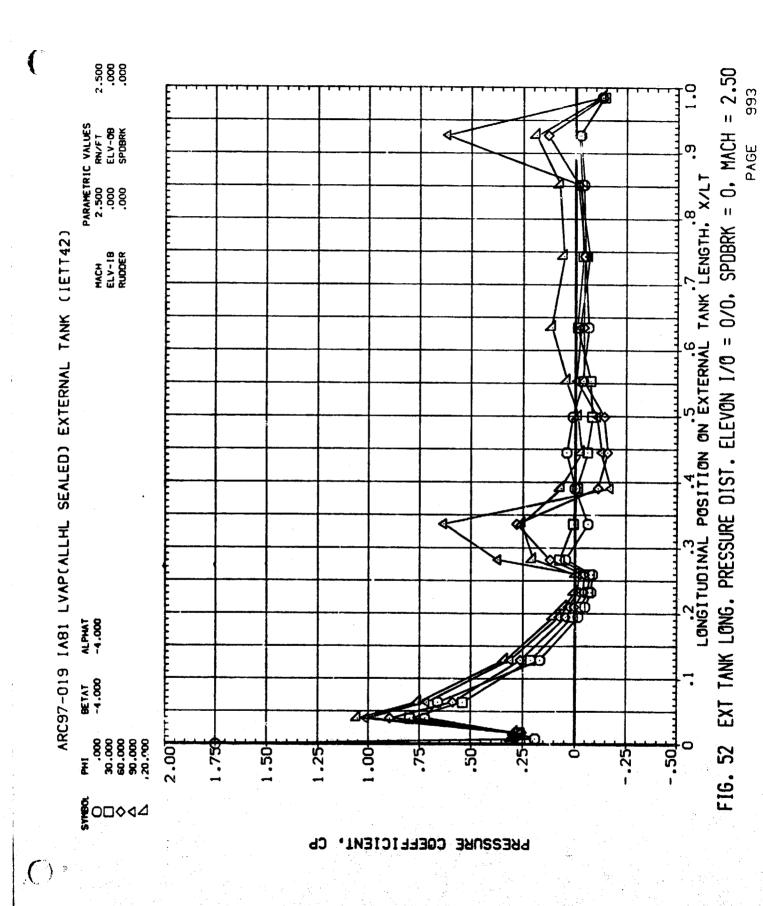
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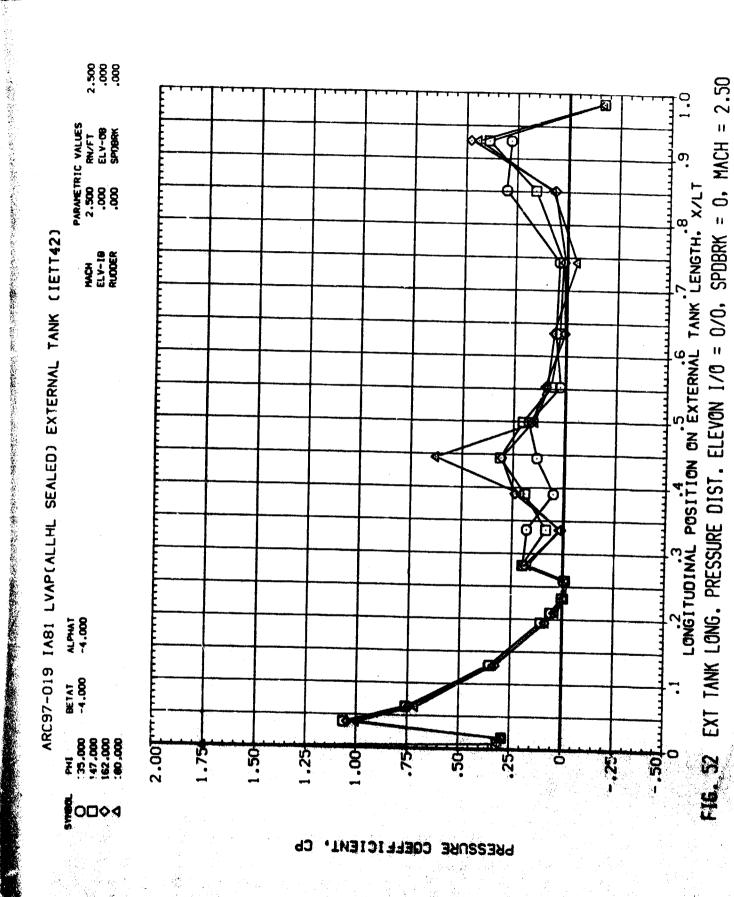
2.500 FIG. 51 EXT TANK LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.20 PARAMETRIC VALUES 2.200 RN/FT .000 ELV-08 LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH. X/LT ARC97-019 IA81 LVAP(ALLHL SEALED) EXTERNAL TANK (IETT41) MACH ELV-18 RUDDER ALPHAT 6.000 BETAT .000 PHI :35.000 :47.000 :62.000 2.00F 1.50 8.0 -.50 0004 PRESSURE COEFFICIENT



2.500 .000 .000 PARAMETRIC VALUES 2.500 RN/FT .000 ELV-08 LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH, X/LT ARC97-019 IABI LVAP(ALLML SEALED) EXTERNAL TANK (IETT42) MACH ELV-18 RUDDER ALPHAT -6.000 .000 **E**O□◊4

FIG. 52 EXT TANK LONG. PRESSURE DIST. ELEVON I/0 = 0/0, SPDBRK = 0, MACH = 2.50





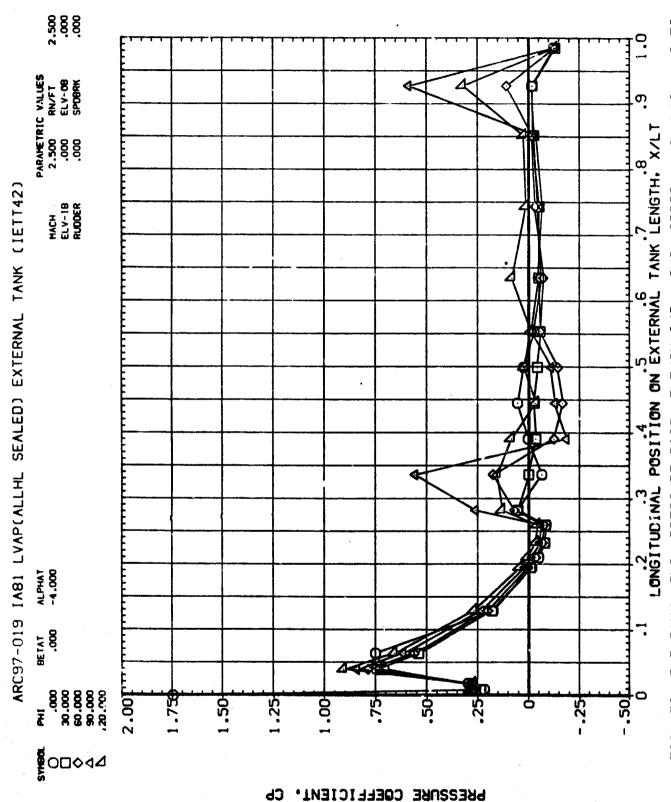
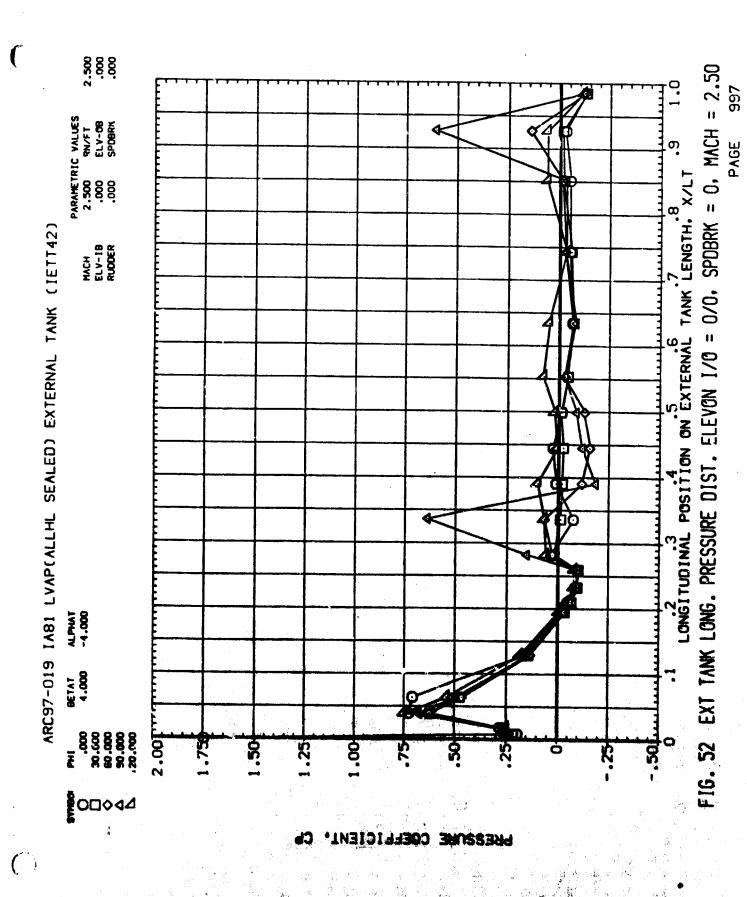


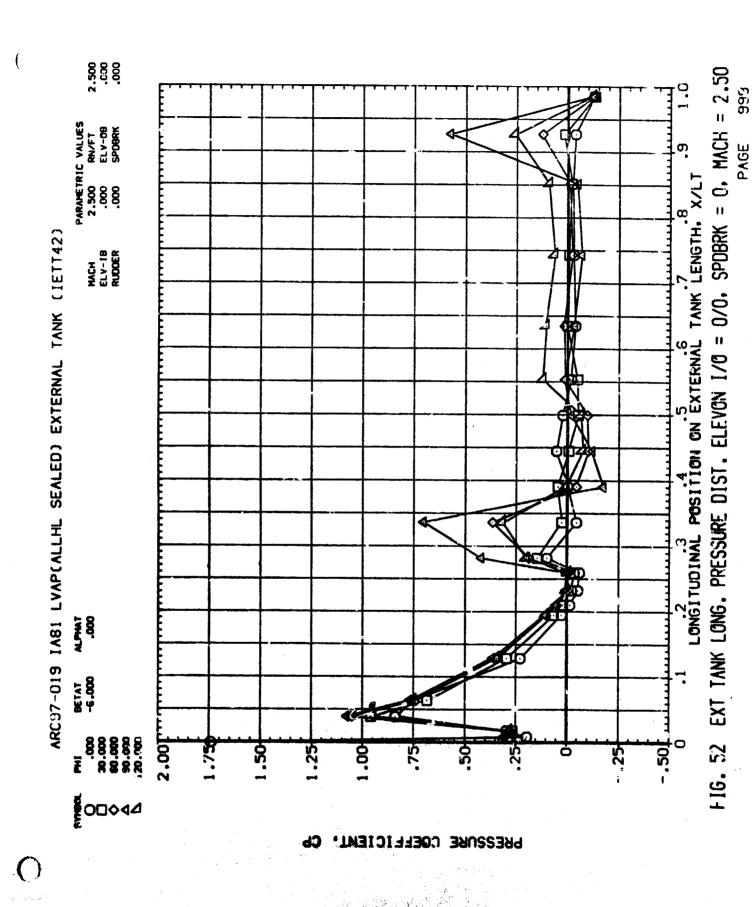
FIG. 52 EXT TANK LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.50

2. 8. 8. 8. 8. 8. PARAMETRIC VALUES 2.500 RN/FT .000 ELV-08 ARC97-019 IA81 LVAP(ALLHL SEALED) EXTERNAL TANK (IETT42) MACH ELV-18 RUDDER ALPHAT 8£147 .000 35.000 147.000 162.000 180.000 2.001

FIG. 52 EXT TANK LONG. PRESSURE DIST. ELEVON 1/0 = 0/0, SPDBRK = 0, MACH = 2.50 LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH. X/LT

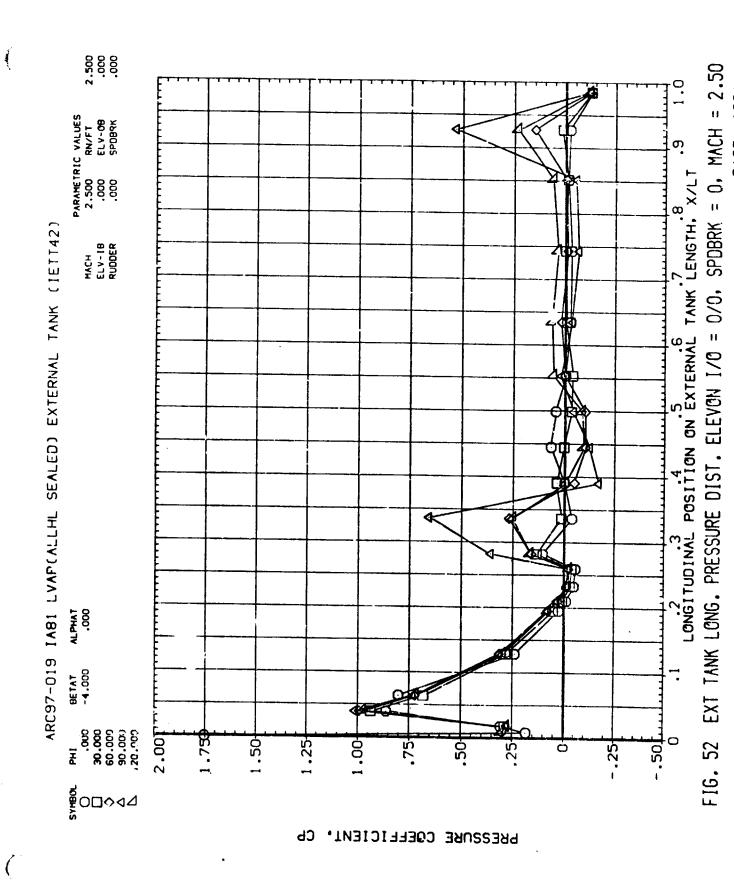


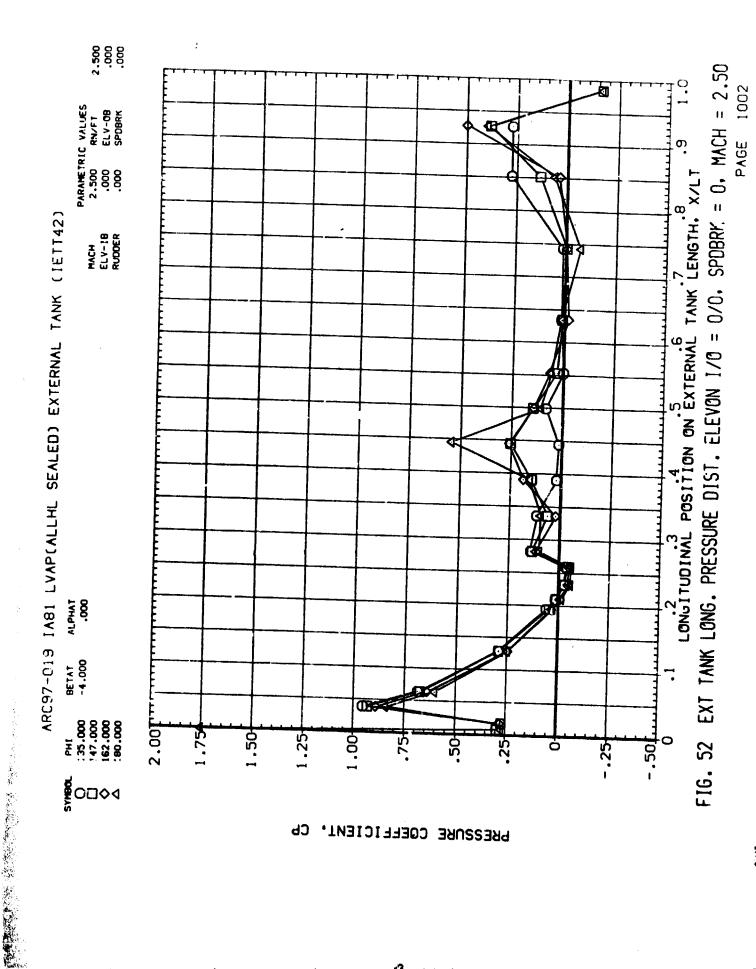
2.500 .000 .000 LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH, x_{ALT} .9 1.0 FIG. 57 EXT TANK LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.50 PARAMETRIC VALUES 2.500 RN/FT .000 ELV-08 ARC97-019 IA81 LVAP(ALLHL SEALED) EXTERNAL TANK (IETT42) MACH ELV-18 RUDDER A.080.1 4.000.4 2.00

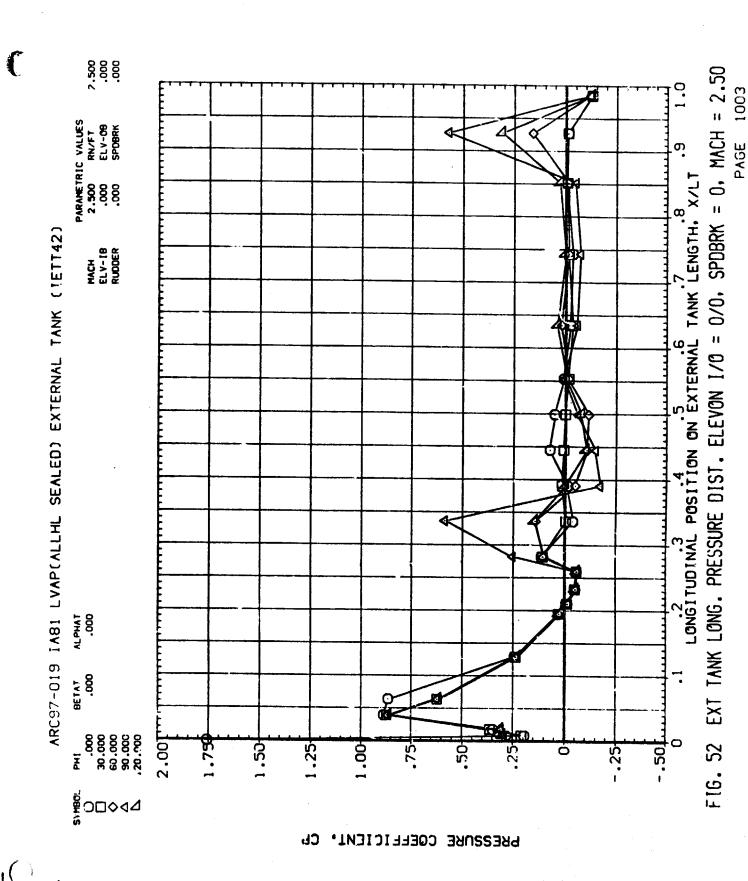


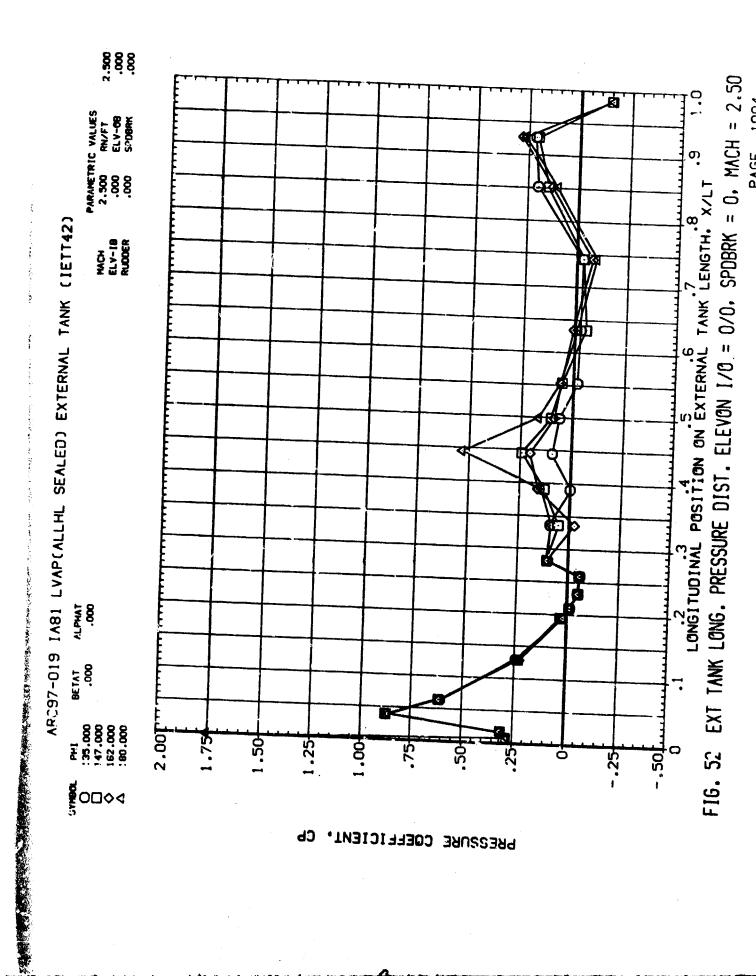
2.000 0.000 0.000 PARAMETRIC VALUES 2.500 RN/FT .000 ELV-08 0 LENGITUDINAL POSITION ON EXTERNAL TANK LENGTH. X/LT ARC97-019 IA81 LVAPCALLHL SEALED) EXTERNAL TANK (IETT42) MACH FLV-18 RUDDER ALPHAT 3ETAT -6.000 7.000.2 PHI 35.000 47.000 62.000 1.75 1.50 1.25 1.00 .50 -.50 -.25 § 0□◊4 PRESSURE COEFFICIENT,

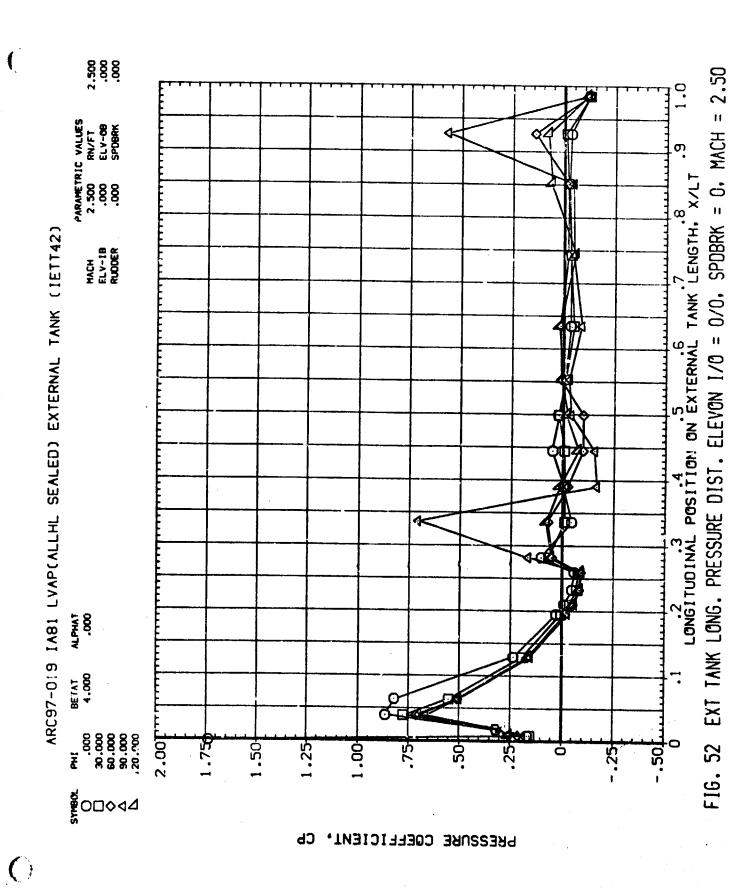
FIG. 52 EXT TANK LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.50

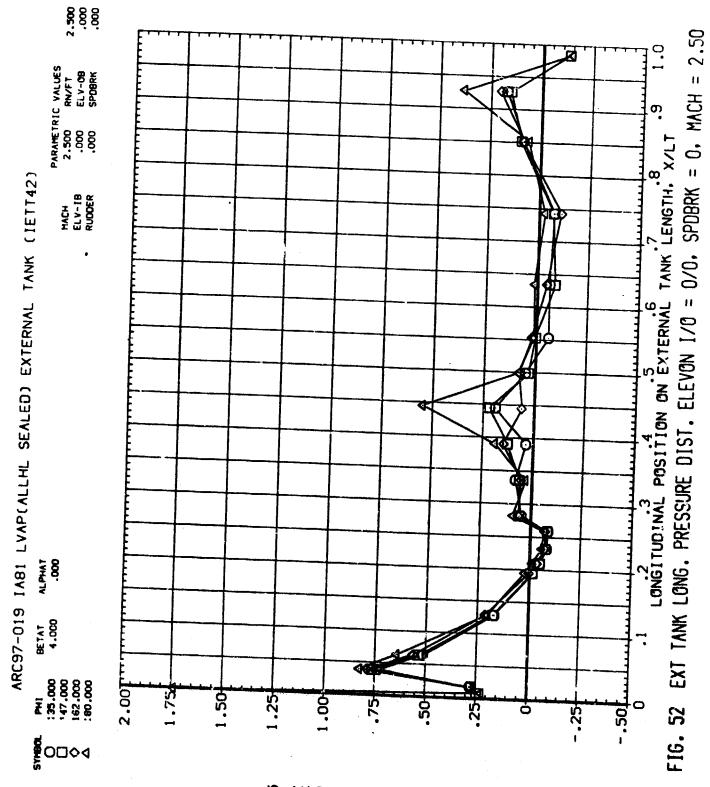




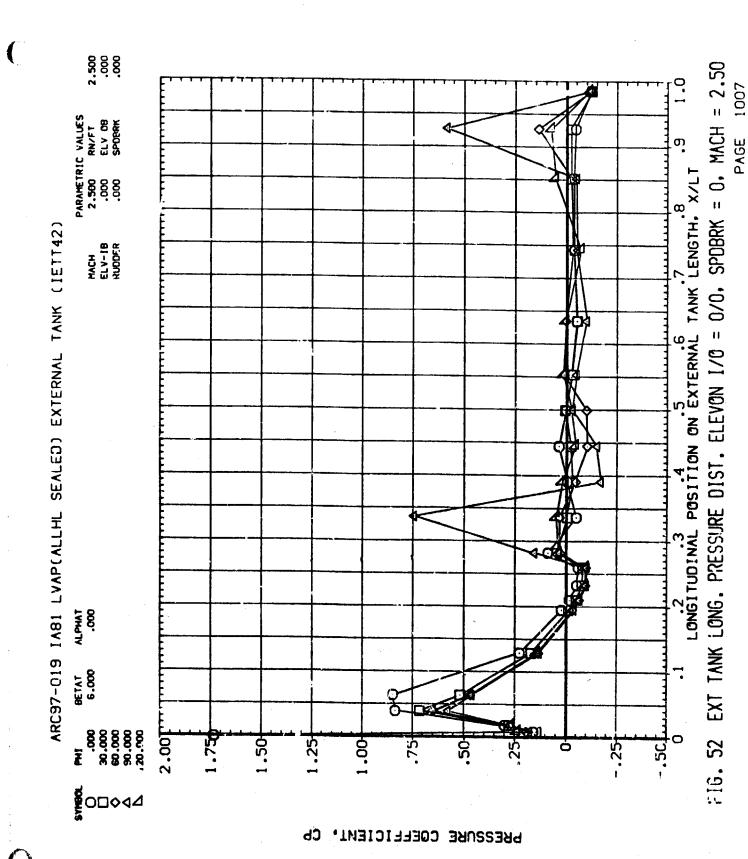


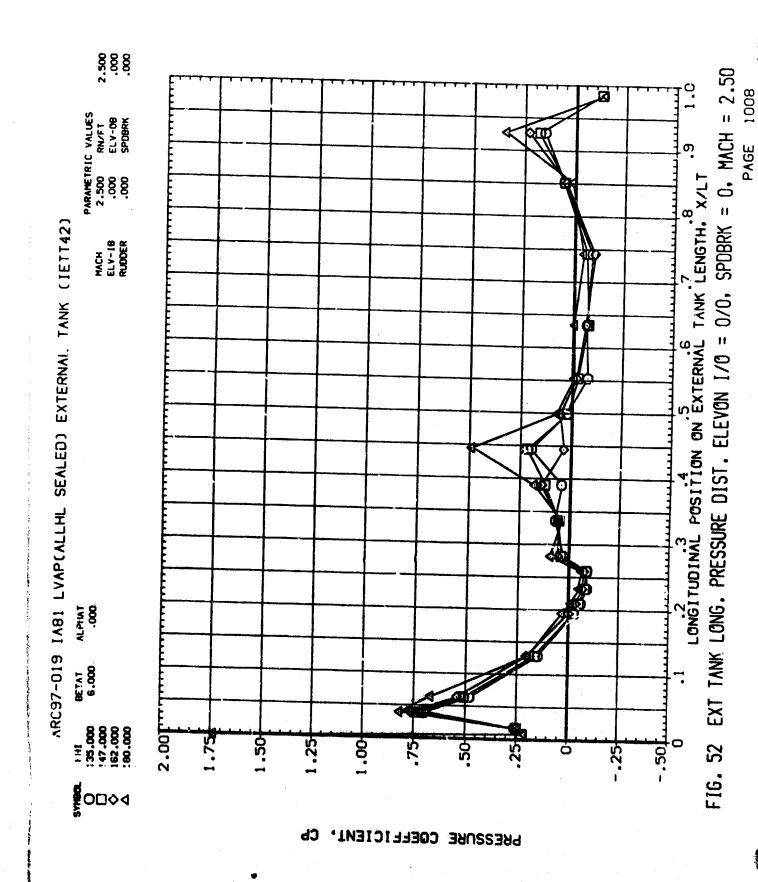


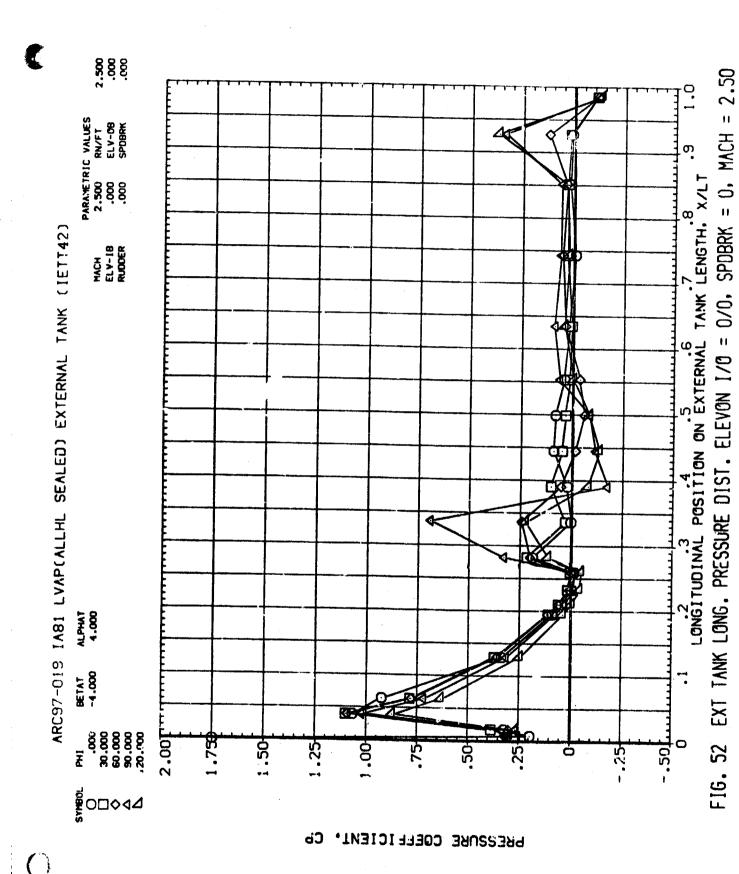


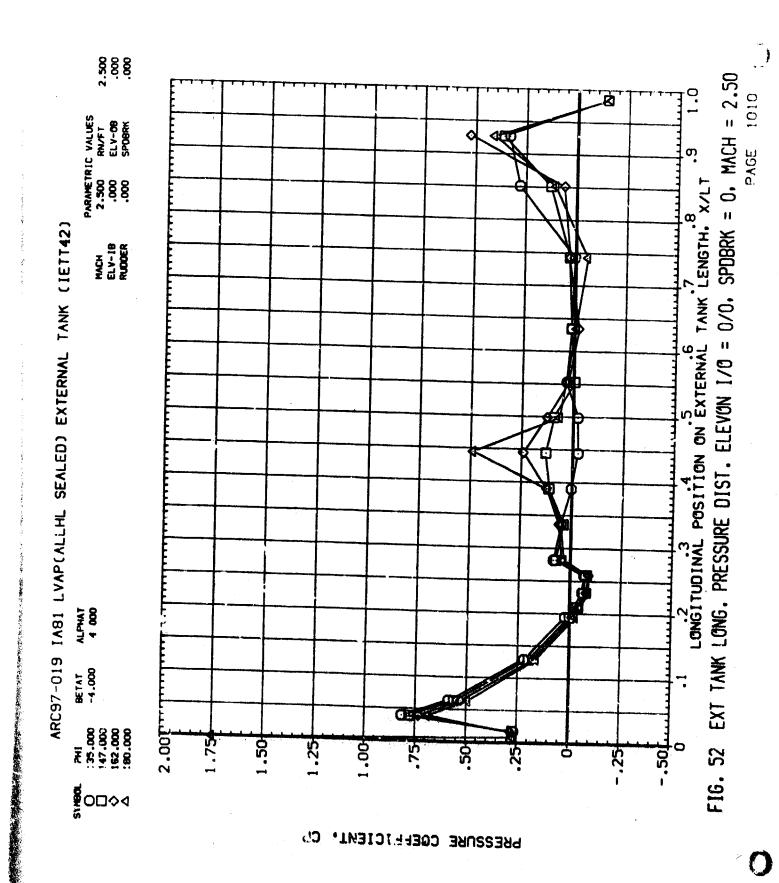


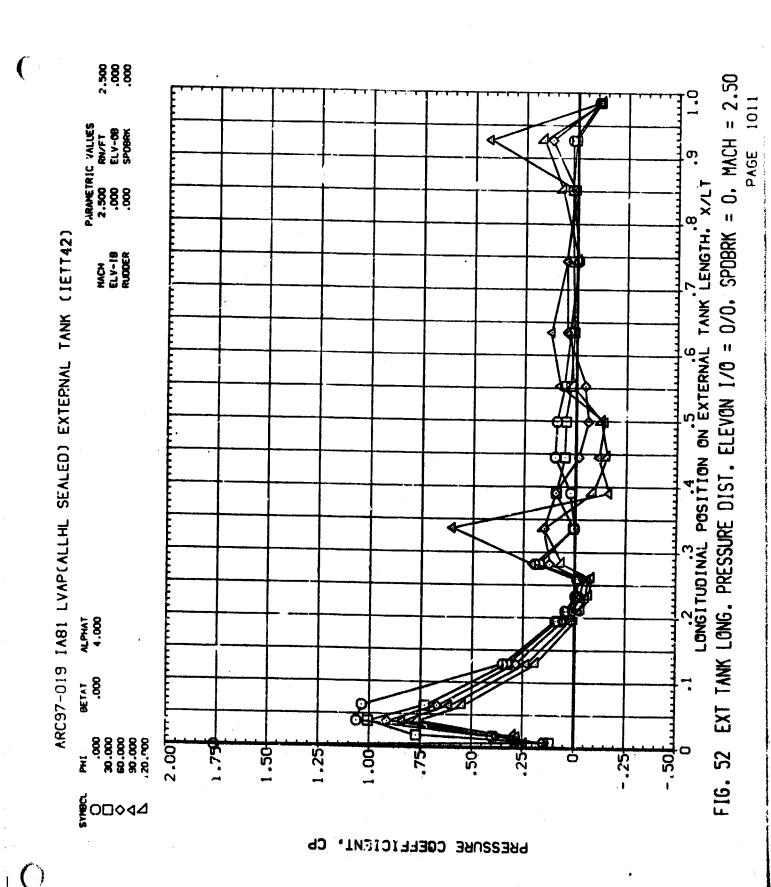
PRESSURE COEFFICIENT, CP

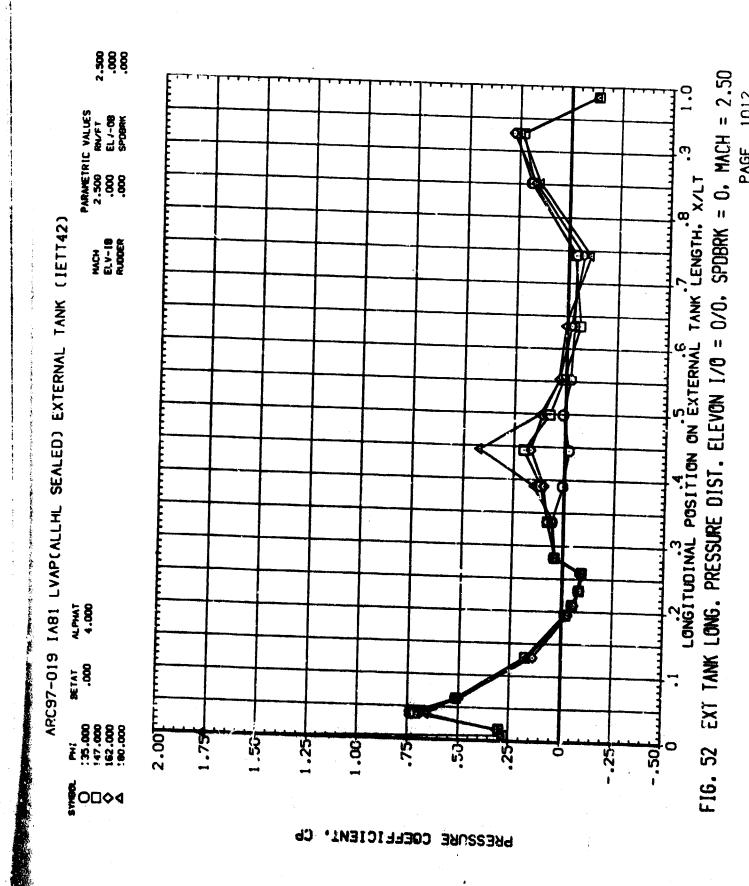


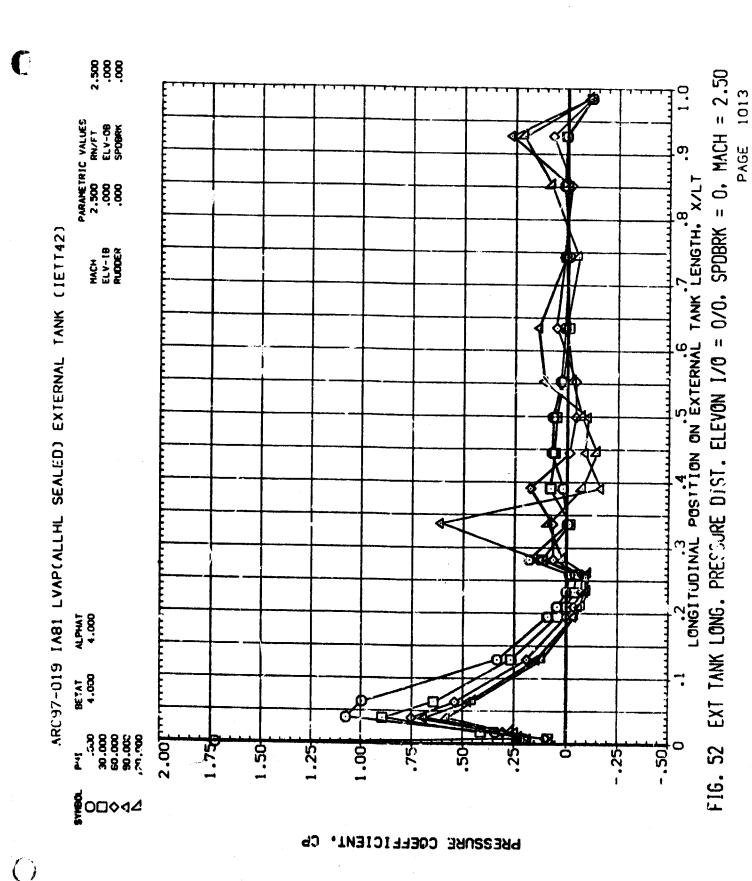








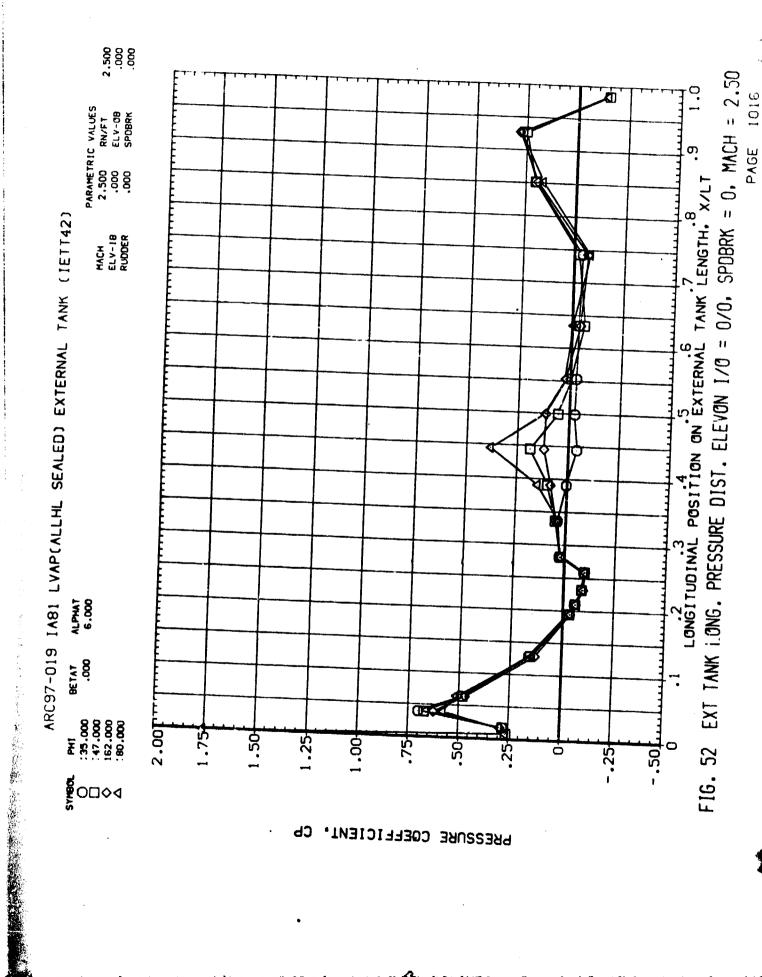




2.500 PARAMETRIC VALUES 2.500 RN/FT .000 ELV: 08 ARC97-019 IA81 LVAP(ALLHL SEALED) EXTERNAL TANK (IETT42) MACH ELV-18 RUDDER ALPHAT 4.000 BETAT 4.000 2.00T 35.000 47.000 162.000 1.75 1.50 1.25 1.00 75 -.50 -.25 PRESSURE COEFFICIENT,

EXT TANK LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.50 LONGITUDINAL POSITION ON EXTERNAL TANK LENGTH. X/LT FIG. 52

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PAGE 1017 FIG. 53 SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0. SPDBRK = 0. MACH = 1.55

2.50 9.90 9.90 9.90 PARPHETRIC VALUES
1.550 RN/F1
.000 ELV-08
.000 SPDBRK LONGITUDINAL POSITION ON SRB LENGTH. X/LS (IETS39) MACH ELV-18 RUDOER ARC97-019 IA81 LVAP(ALLHL SEALED) SRM BOOSTER ALPHAL ..6.000 8ETAL .000 PHI :80.000 :25.000 :70.000 315.000 2.50F 2.25 2.00 .75 50 8 .25 .75 -.25 -.50 50 § O□◊4

FIG. 53 SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 1.55

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SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0. SPDBRK = 0, MACH = 1.55 LONGITUDINAL POSITION ON SRB LENGTH, X/LS FIG. 53

2.500 PARAMETRIC VALUES 1.550 RN/FT .000 ELV-08 (IETS39) MACH ELV-18 RUDDER ARC97-019 IA81 LVAP(ALLHL SEALED) SRM BOOSTER ALPHAL -4.000 BETAL .000 PHI :80,000 225,000 270,000 315,000 2.50F 2.25 2.00 1.50 1.75 00 .75 50 -.25 -.50 **§**O□◊⊲ PRESSURE COEFFICIENT,

FIG. 53 SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0. SPDBRK = 0. MACH = 1.55 LONGITUDINAL POSITION ON SRB LENGTH, X/LS

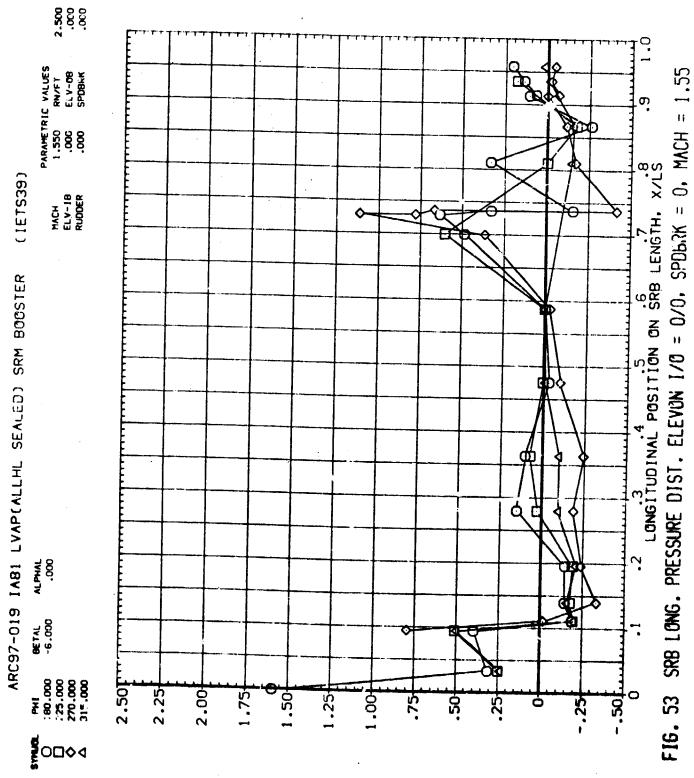
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PAGE

FIG. 53 SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 1.55

FIG. 53 SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 1.55

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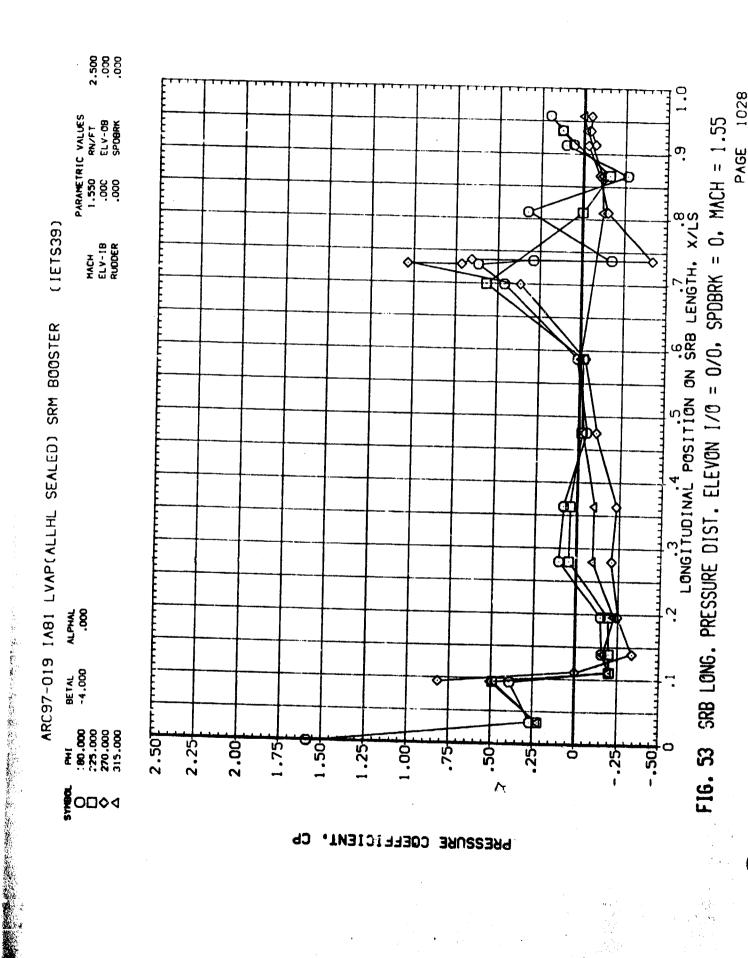
PAGE 1026

PRESSURE COEFFICIENT,

2.500 PARAMETRIC VALUES
1.550 RN/F1
.000 ELV-0B
.000 SPDBRK LONGITUDINAL POSITION ON SRB LENGTH, X/LS (IETS39) MACH ELV-18 RUDDER ARC97-019 IA81 LVAP(ALLHL SEALED) SRM B00STER ALPHAL .000 BETAL -4.000 2.50F ,000 45,000 90,000 35,000 2.25 2.00 -.25 1.75 .75 1.50 1.25 1.00 -.50 Sylegical O□ ◇ 4

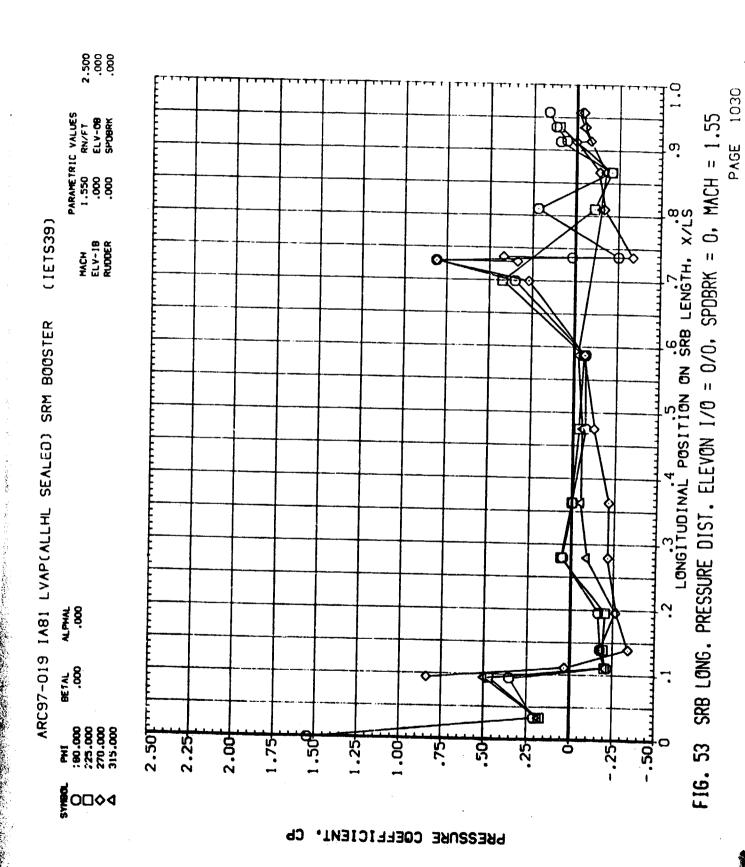
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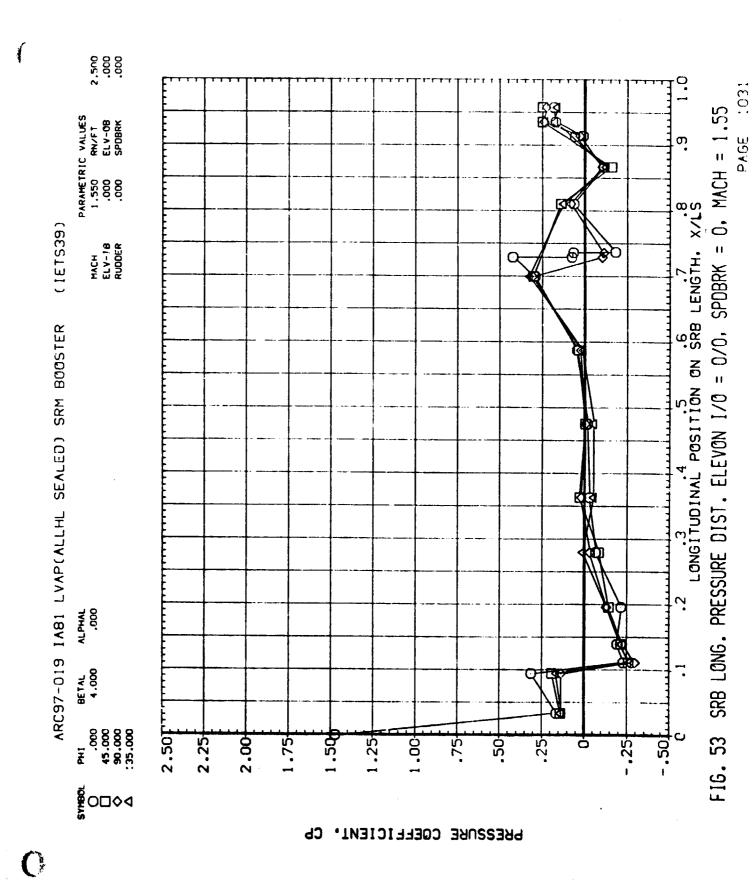
PAGE 1027 FIG. 53 SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPOBRK = 0, MACH = 1.55



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FIG. 53 SRB LONG. PRESSURE DIST. ELEVON 1/0 = 0/0, SPOBRK = 0, MACH = 1.55





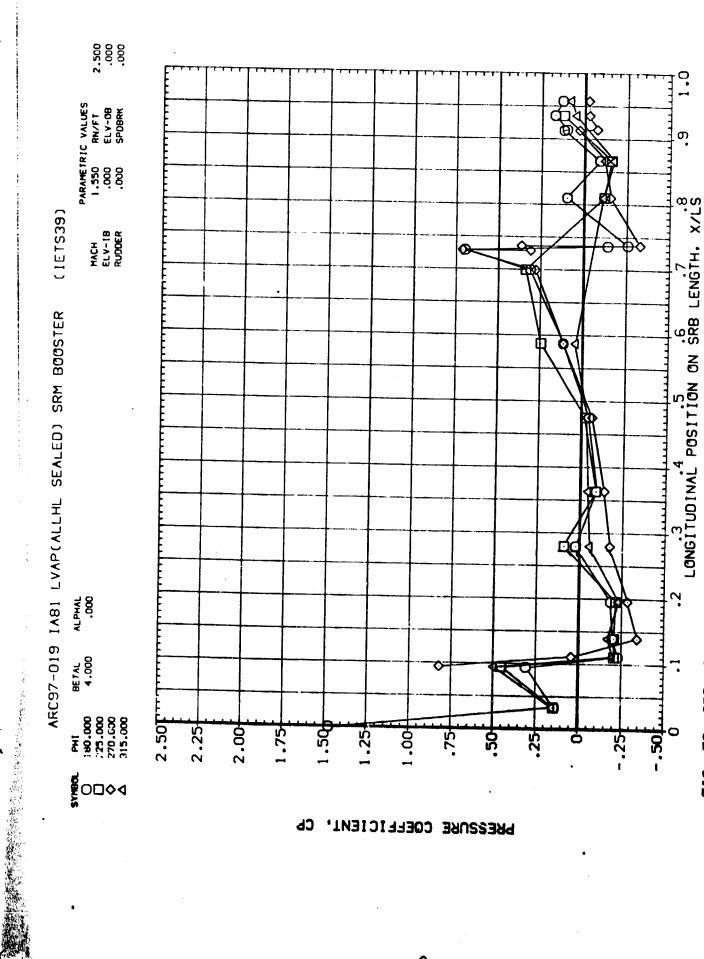


FIG. 53 SRB LONG. PRESSURE DIST. ELEVON I/0 = 0/0, SPDBRK = 0, MACH = 1.55

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2.500 PARAMETRIC VALUES
1.550 RN/F1
.000 ELV-08
.000 SPDERK LONGITUDINAL POSITION ON SRB LENGTH, X/LS (1ETS39) MACH ELV-18 RUDOER ARC97-019 IA81 LVAP(ALLHL SEALED) SRM BOOSTER ALPHAL .000 BETAL 6.000 45.000 90.000 35.000 2.50F 2.25 1.75 2.00 1.50 1.25 1.00 50 -.25 -.50

FIG. 53 SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0. SPOBRK = 0. MACH = 1.55

2.500 .000 .000 808 848 PARAMETRIC VALUES
1.550 RN/FT
.000 ELV-0B
.000 SPDBRK SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0. SPDBRK = 0, MACH = 1.55 LONGITUDINAL POSITION ON SRB LENGTH, X/LS (IETS39) MACH ELV-18 RUDDER ARC97-019 IA81 LVAP(ALLHL SEALED) SRM BOOSTER प्क ALPHAL .000 9£7AL 6.000 PHI :80.000 :25.000 270.000 315.000 2.50F 2.25 2.00 FIG. 53 1.75 1.50 .75 1.25 1.00 δ S -.50 -.25 **2**0□◊4

PRESSURE COEFFICIENT, CP

2.500 PARAMETRIC VALUES
1.550 RN/FT
.000 ELV-08
.000 SPDBRK LONGITUDINAL POSITION ON SRB LENGTH. X/LS (IETS39) MACH ELV-18 RUDDER ARC97-019 IA81 LVAP(ALLHL SEALED) SRM BOOSTER ALPHAL 4.000 BETAL -4.000 PH1 .000 .90.000 .35.000 2.50F 2.25 2.00 .75 1.75 -.25 -.50 1.50 1.00 **§** ○□ ◊ 4

FIG. 53 SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0. SPDBRK = 0, MACH = 1.55

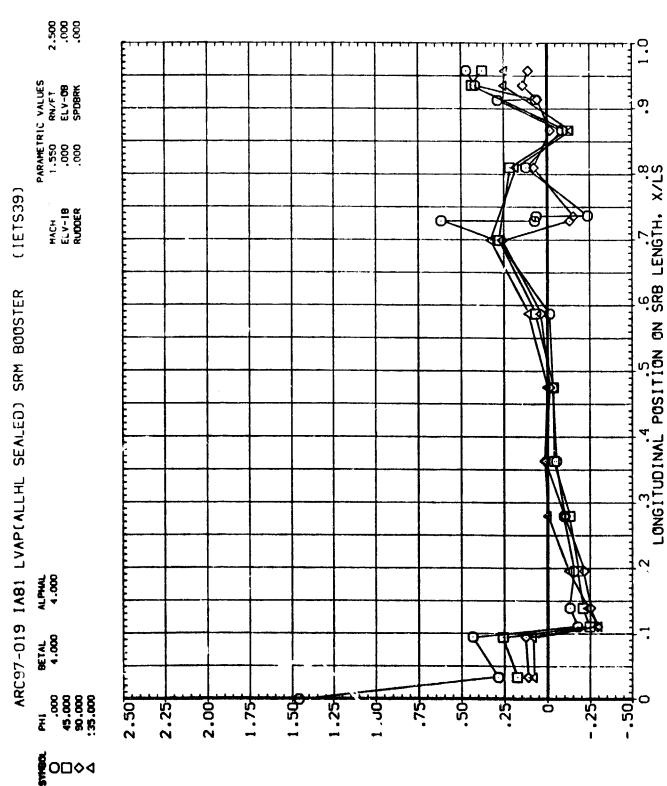
2.500 .000 .000 PARAMETRIC VALUES 1,550 RN/FT .000 ELV-08 LONGITUDINAL POSITION ON SRB LENGTH, X/LS (IETS39) MACH ELV-18 RUDDER ARC97-019 IA81 LVAP(ALLHL SEALED) SRM BOOSTER ALPHAL 4.000 **6€***∧∟ -4.000 315.000 315.000 2.50F 2.25 2.00 1.50 1.75 1.25 <u>. 0</u> <u></u> 50 -.50 -.25 PRESSURE COEFFICIENT,

PAGE 1036

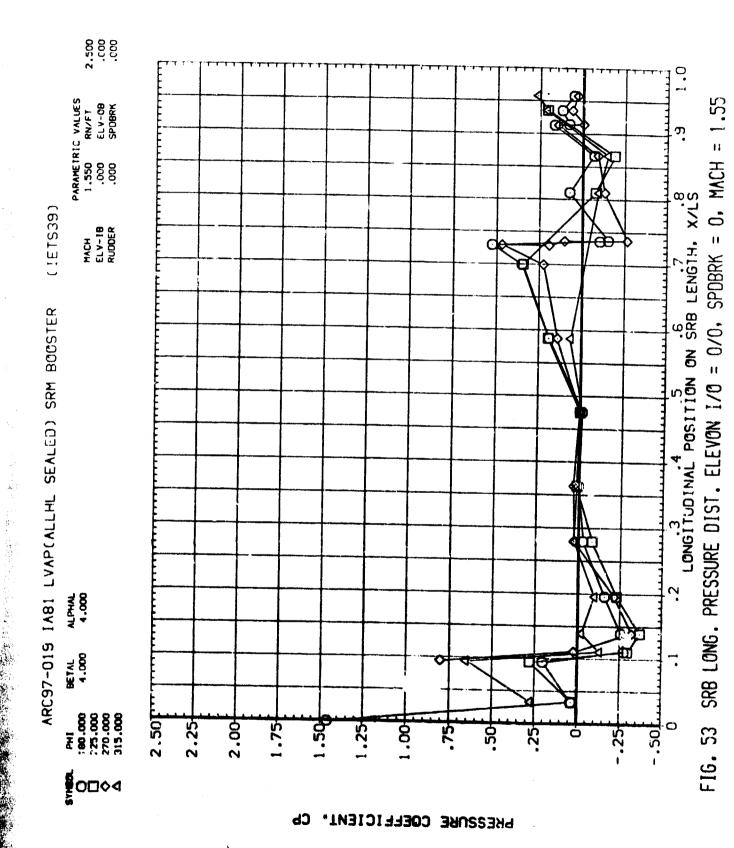
FIG. 53 SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 1.55

2.50 0.00 .000 FIG. 53 SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0. SPDBRK = 0. MACH = 1.55 PARAMETRIC VALUES
1.550 RN/FT
.000 ELV-08
.000 SP08RK LONGITUDINAL POSITION ON SRB LENGTH, X/LS (IETS39) MACH ELV-18 RUDDER ARC97-019 IA81 LVAP(ALLHL SEALED) SRM BOOSTER ALPHAL 4.000 9ETAL .000 . 55.000 . 96.000 . 35.000 2.507 2.25 1.75 2.00 **§**0□◊4

FIG. 53 SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 1.55



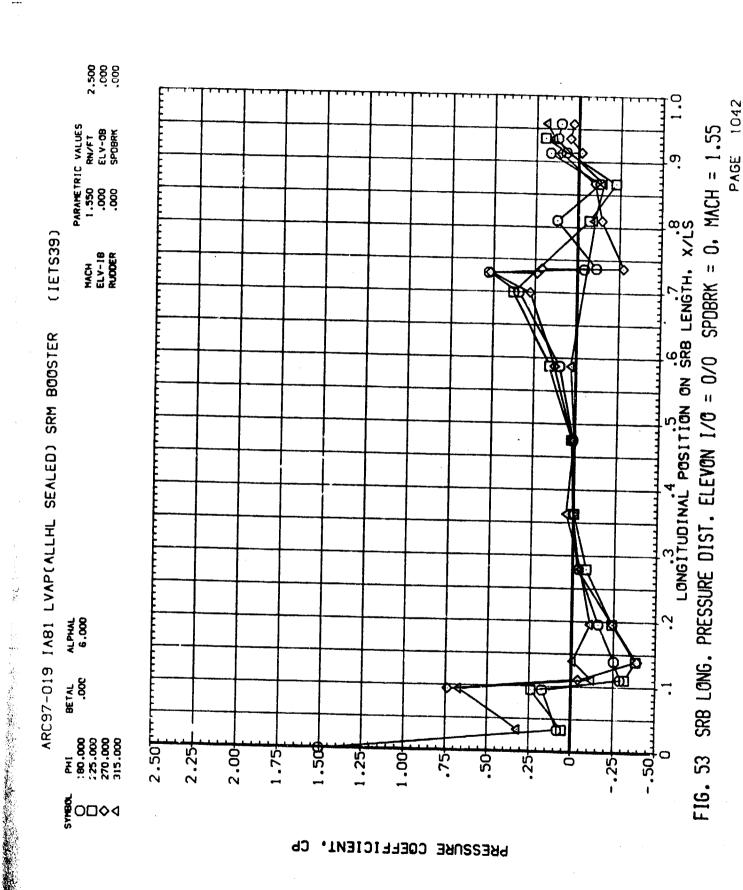
SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 1.55 F16. 53

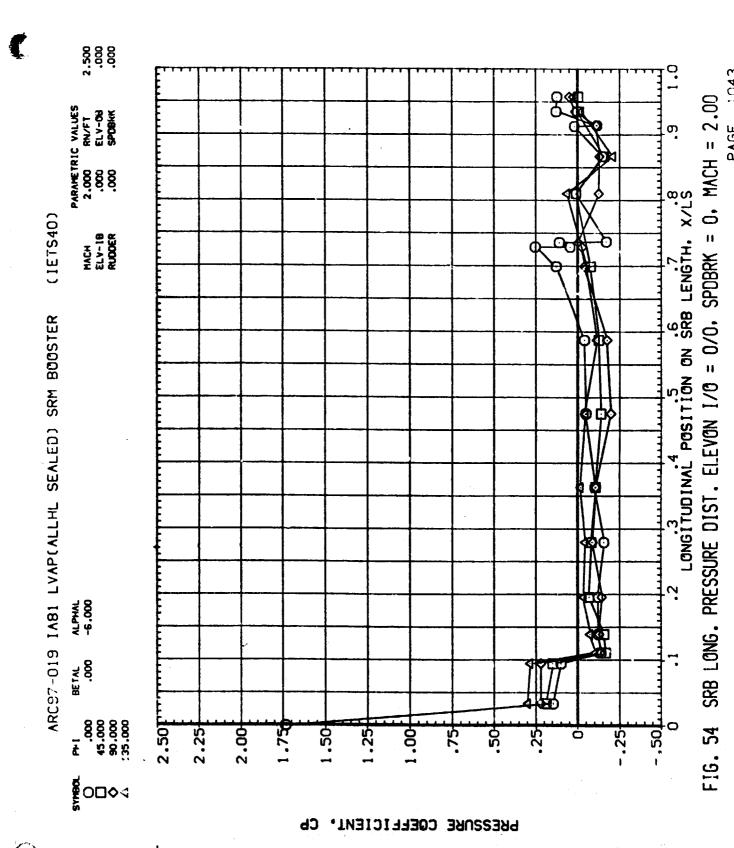


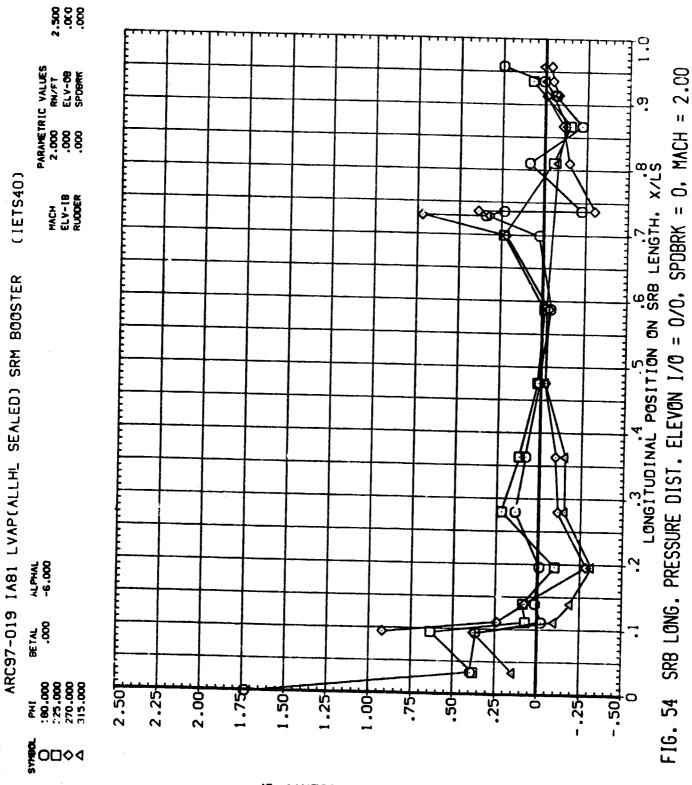
A. A.

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FIG. 53 SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPOBRK = 0, MACH = 1.55





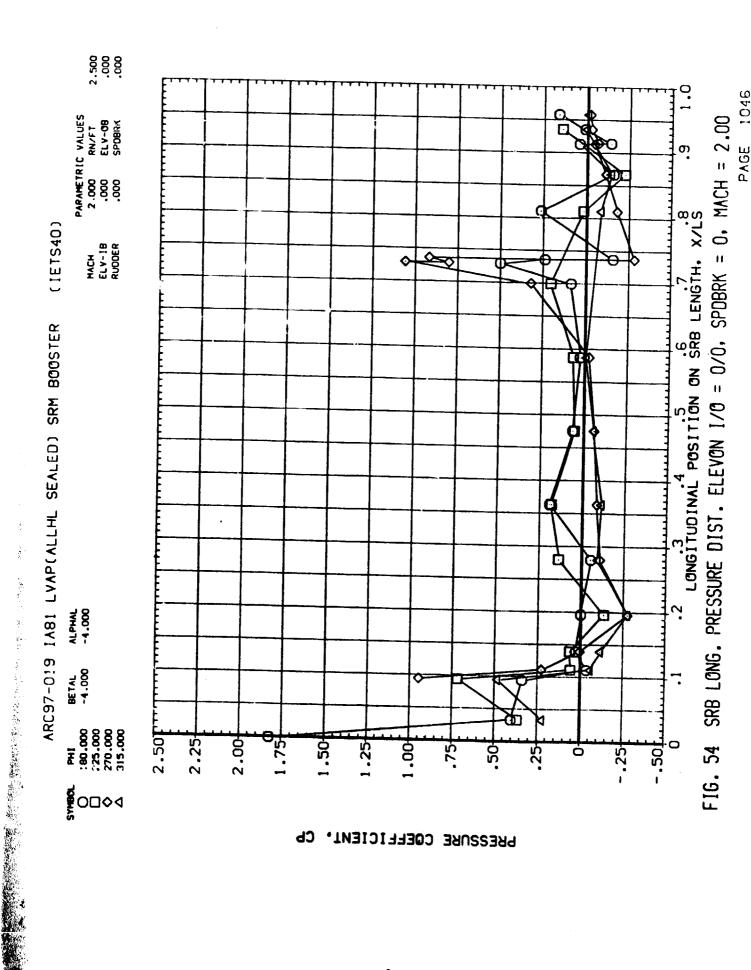


PRESSURE COEFFICIENT, CP

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SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0. SPDBRK = 0. MACH = 2.00

FIG. 54



2.500 PARAMETRIC VALUES 2.000 RN/FI .000 ELV-08 .000 SPDBRK LONGITUDINAL POSITION ON SRB LENGTH. X/LS (IETS40) MACH ELV-18 RUDDER ARC97-019 IA81 LVAP(ALLHL SEALED) SRM BOOSTER ALPHAL -4.000 BETAL .000 H. 55.000 .000.000 .000.000 .000.000 2.50F 1.75 2.25 2.00 9.1 .75 1.50 -50 -.50

PAGE 1047 FIG. 54 SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0. SPDBRK = 0, MACH = 2.00

FIG. 54 SRB LONG. PRESSURE DIST. ELEVON 1/0 = 0/0, SPDBRK = 0, MACH = 2.00

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PAGE 1049

FIG. 54 SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPOBRK = 0, MACH = 2.00

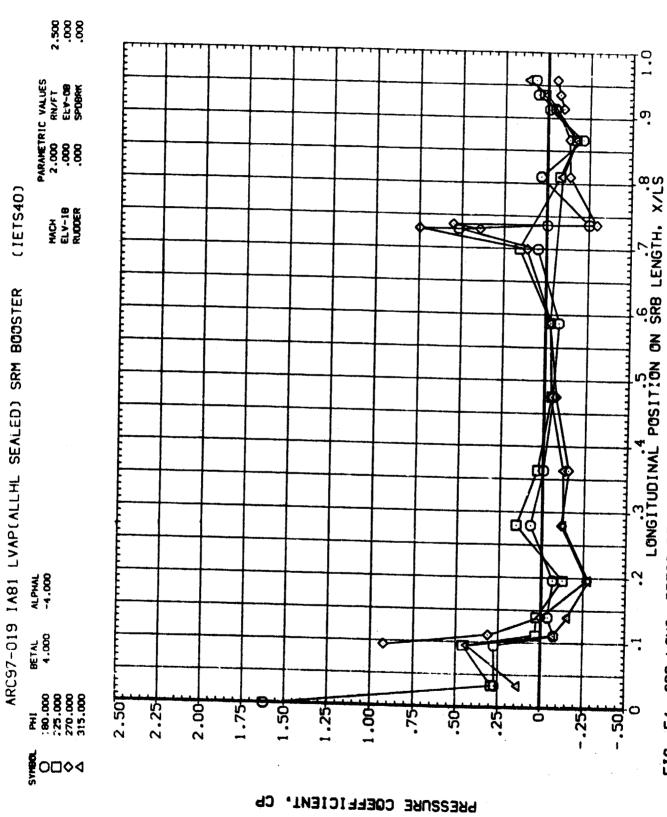


FIG. 54 SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPOBRK = 0, MACH = 2.00

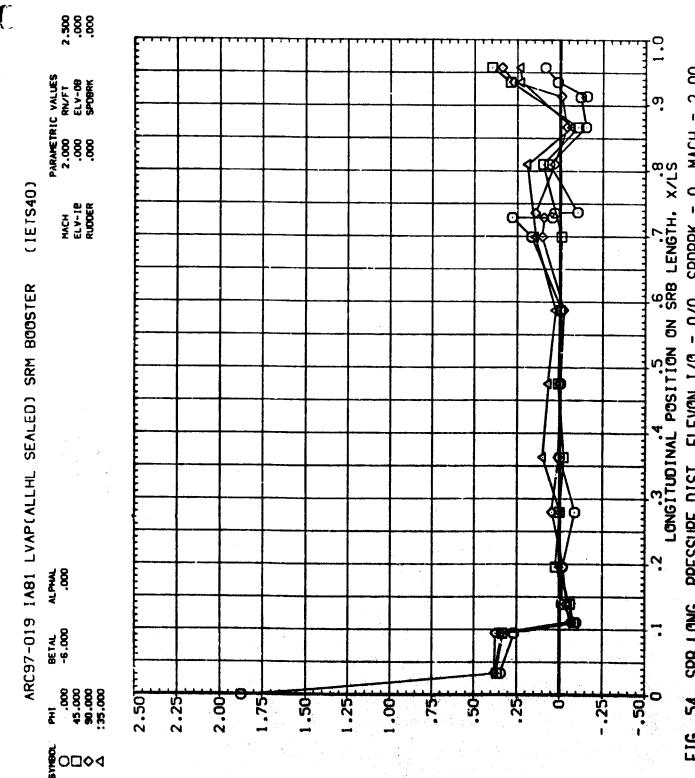
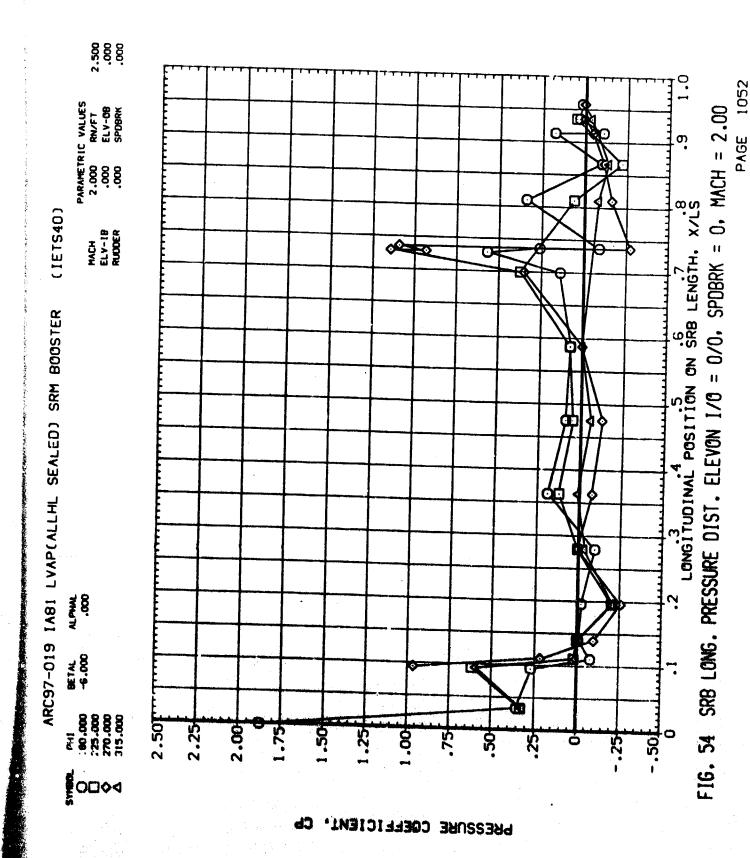
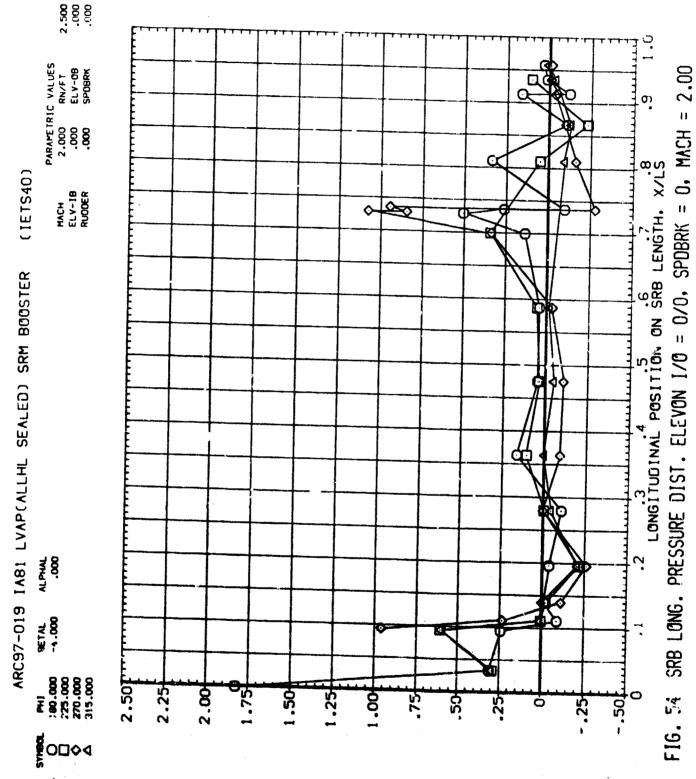


FIG. 54 SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPOBRK = 0, MACH = 2.00

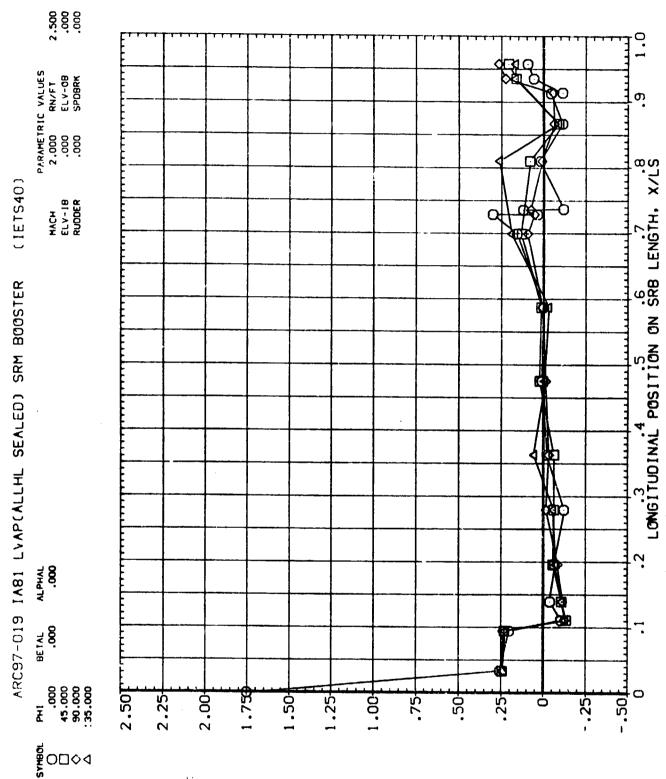


2.50 .000 .000 PARAMETRIC VALUES 2,000 RN/F1 .000 ELV-06 LONGITUDINAL POSITION ON SRB LENGTH. X/LS (IETS40) MACH ELV-19 RUDDER ARC97-019 IA81 LVAP(ALLHL SEALED) SRM BOOSTER ALPHAL. 8€7AL -1.000 25.00 00.00 00.00 00.00 2.50F **必** 2.25 2.00 75 -SQ S. .25 <u>6</u> -.25 -.50 **₹**0□◊4 PRESSURE COEFFICIENT,

PAGE 1053 SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0. SPDBRK = 0. MACH = 2.00 FIG. 54



PRESSURE COEFFICIENT, CP



PAGE 1055 FIG. 54 SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0. SPDBRK = 0. MACH = 2.00

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SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0. SPOBRK = 0, MACH = 2.00 FIG. 54

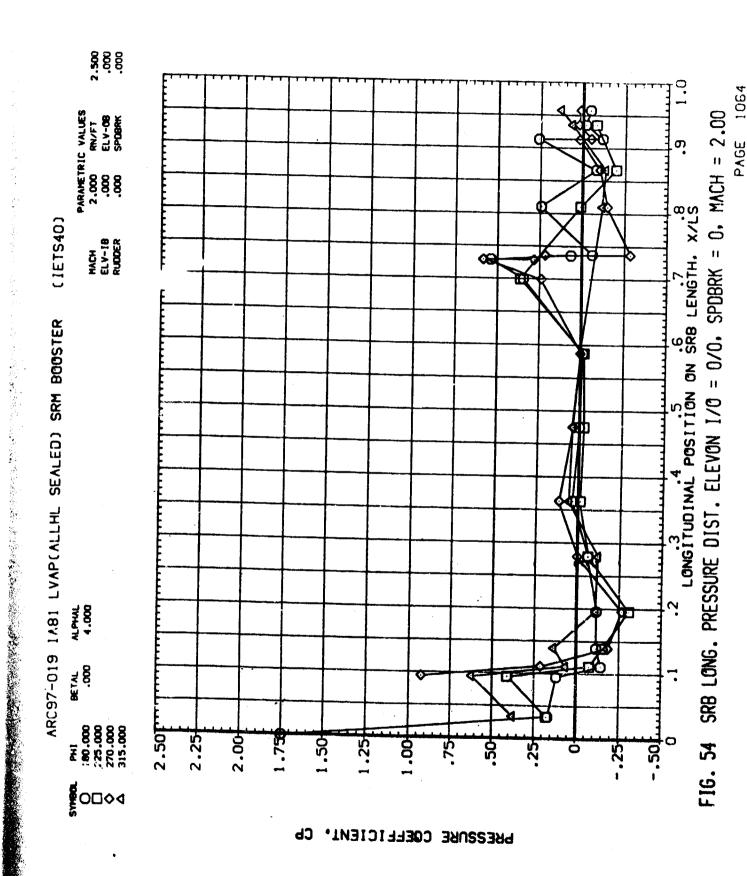
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2.500 PARAMETRIC VALUES 2.000 RN/FT .000 ELV-0B FIG. 54 SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.00 LONGITUDINAL POSITION ON SRB LENGTH, X/LS MACH ELV-18 RUDDER ARC97-019 IA81 LVAP(ALLHL SEALED) SRM BOOS;ER ALPHAL .000 8ETAL 6.000 2.50FT PHI :80.000 :25.000 270.000 315.000 2.25 2.00 . 50 25 8 50 -.25 **№**0□◊4

PAGE 1061

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FIG. 54 SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPOBRK = 0, MACH = 2.00



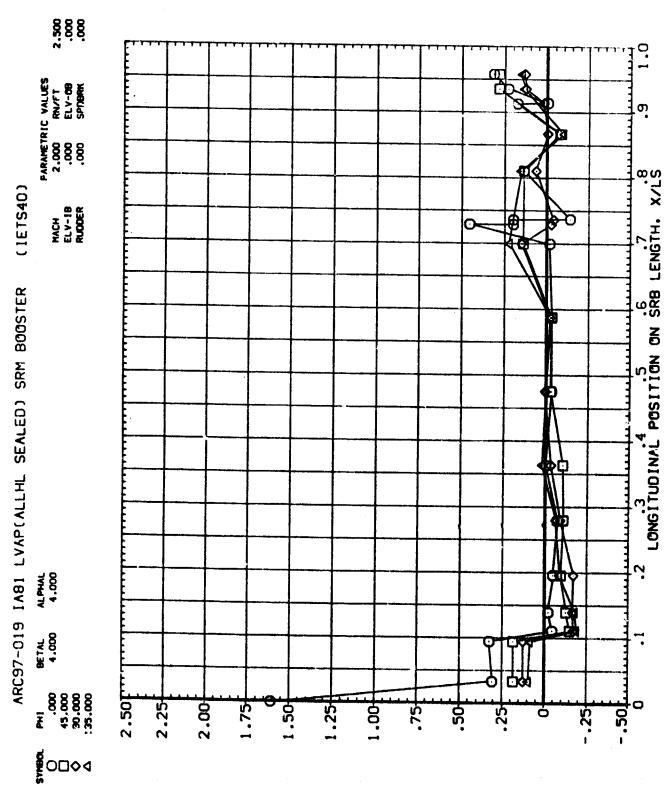
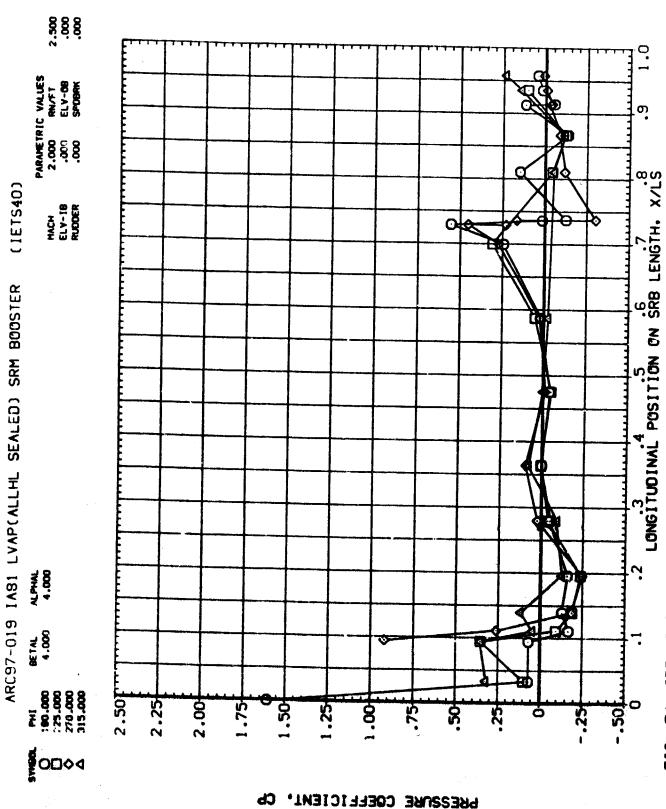


FIG. 54 SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPOBRK = 0, MACH = 2.00



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SRB LONG. FRESSURE DIST. ELEVON I/O = 0/0. SPOBRK = 0. MACH = 2.00 F16. 54

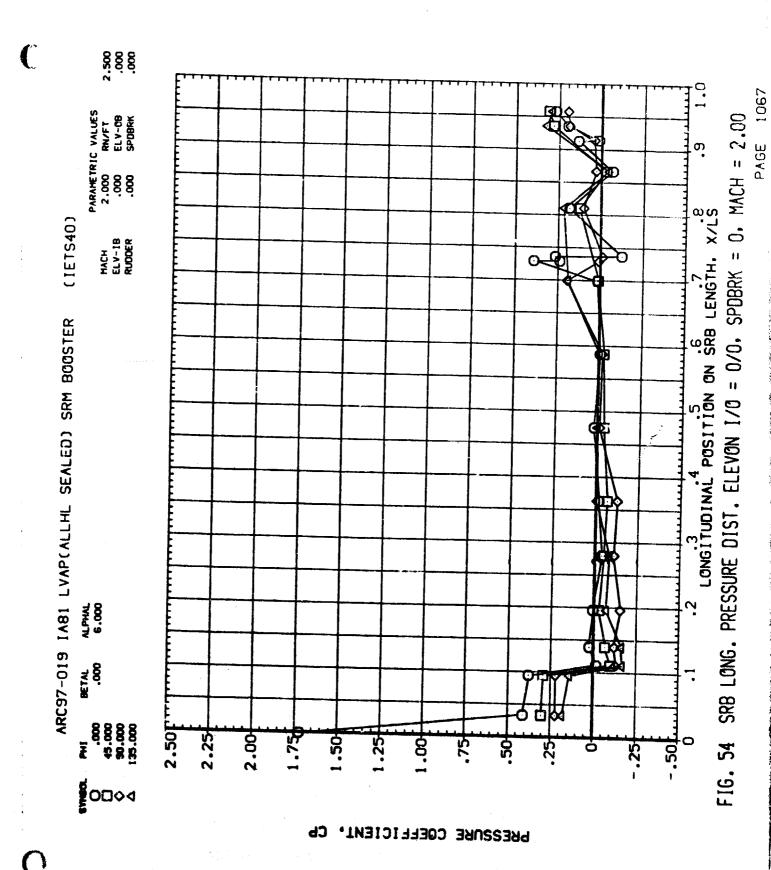
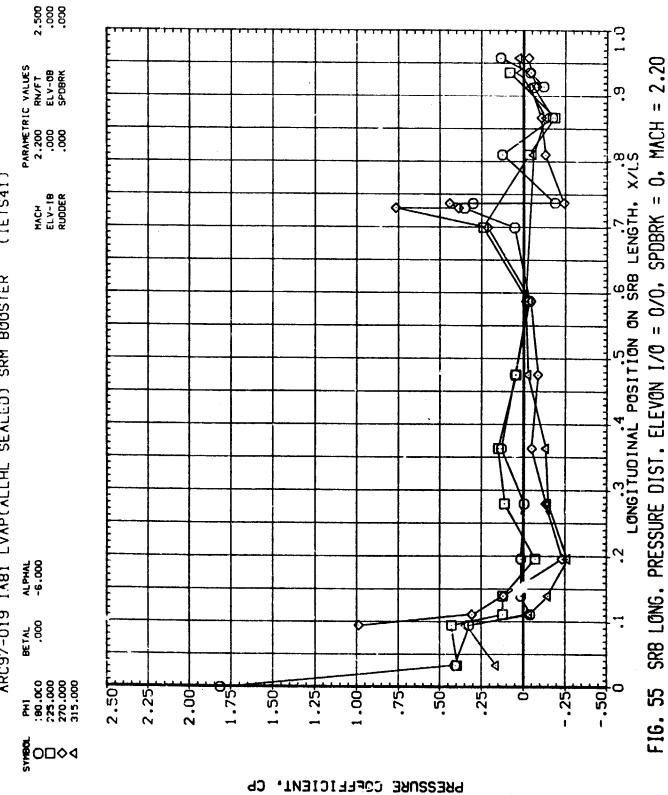
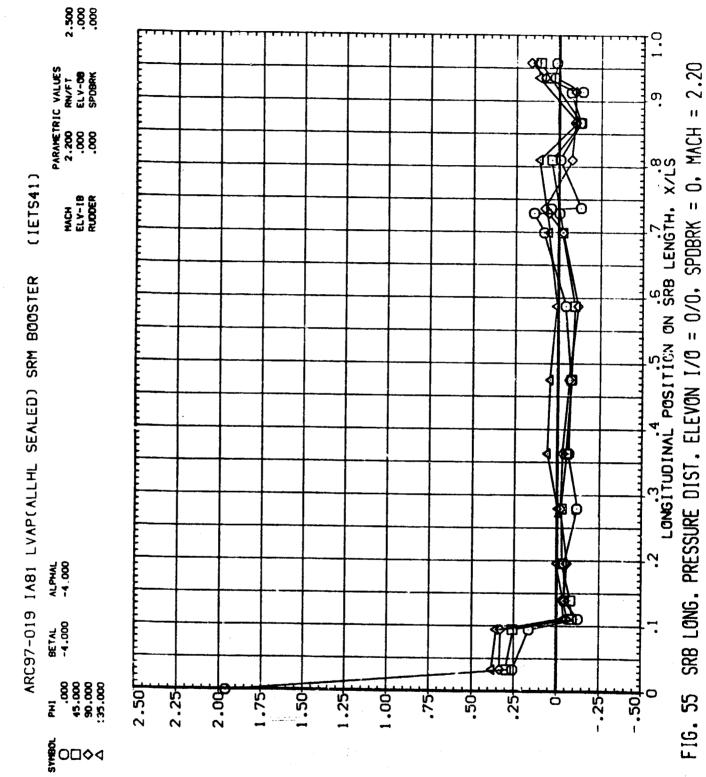


FIG. 54 SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPOBRK = 0, MACH = 2.00 LONGITUDINAL POSITION ON SRB LENGTH. X/LS

PRESSURE COEFFICIENT, CP

(IETS41) ARC97-019 IA81 LVAP(ALLHL SEALED) SRM BOOSTER





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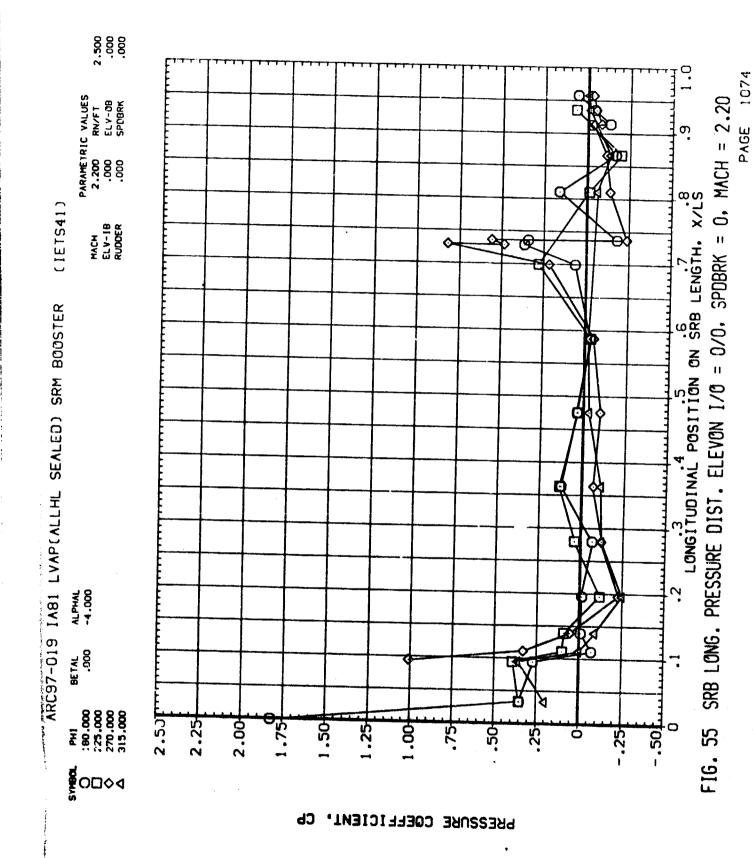
PRESSURE COEFFICIENT, CP

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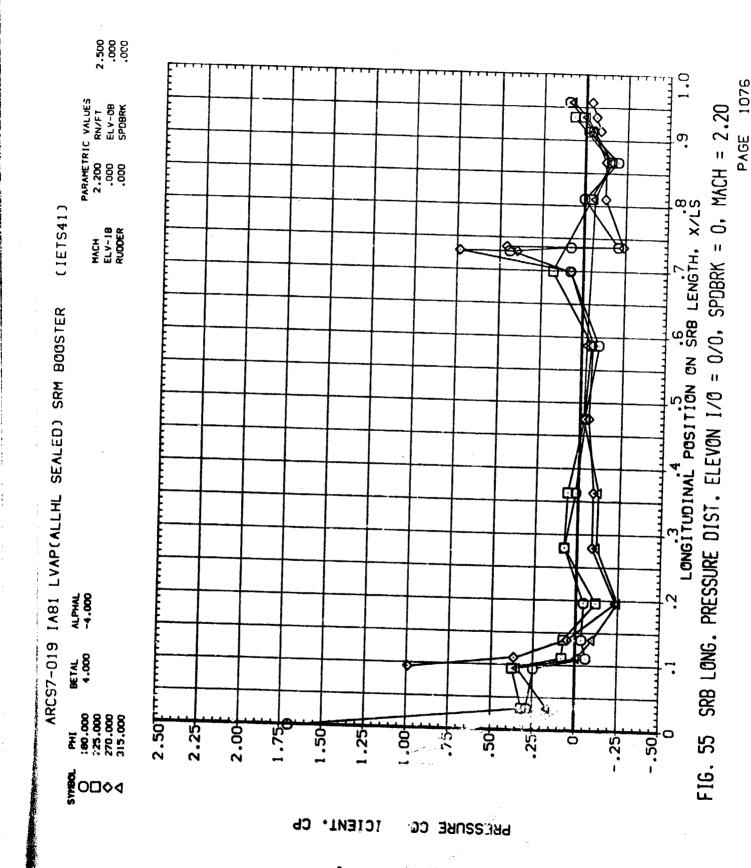
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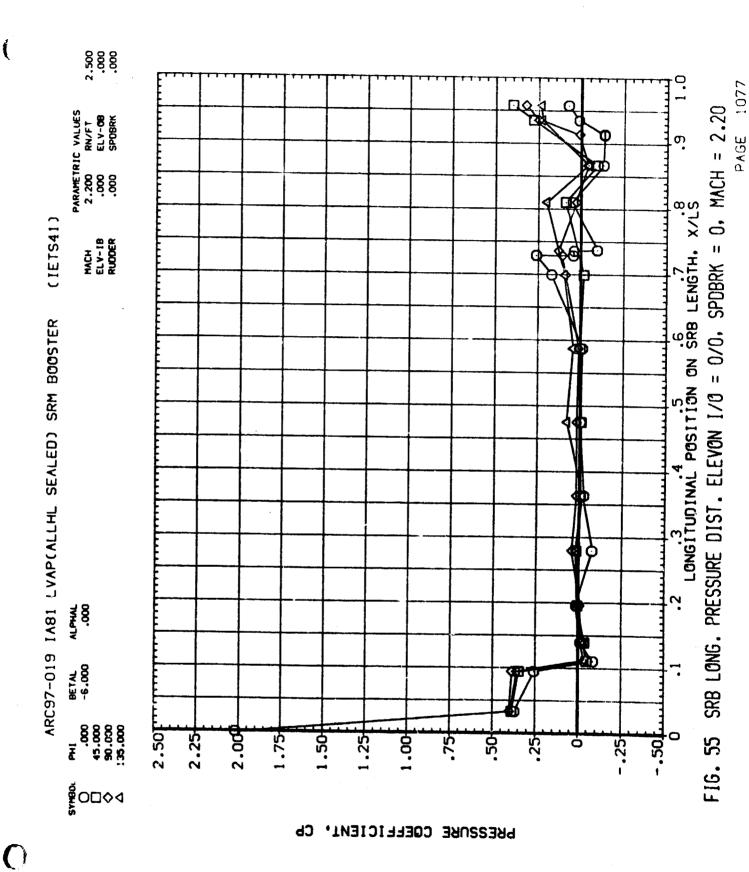
FIG. 55 SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.20

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PAGE 1078 FIG. 55 SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0. SPDBRK = 0. MACH = 2.20

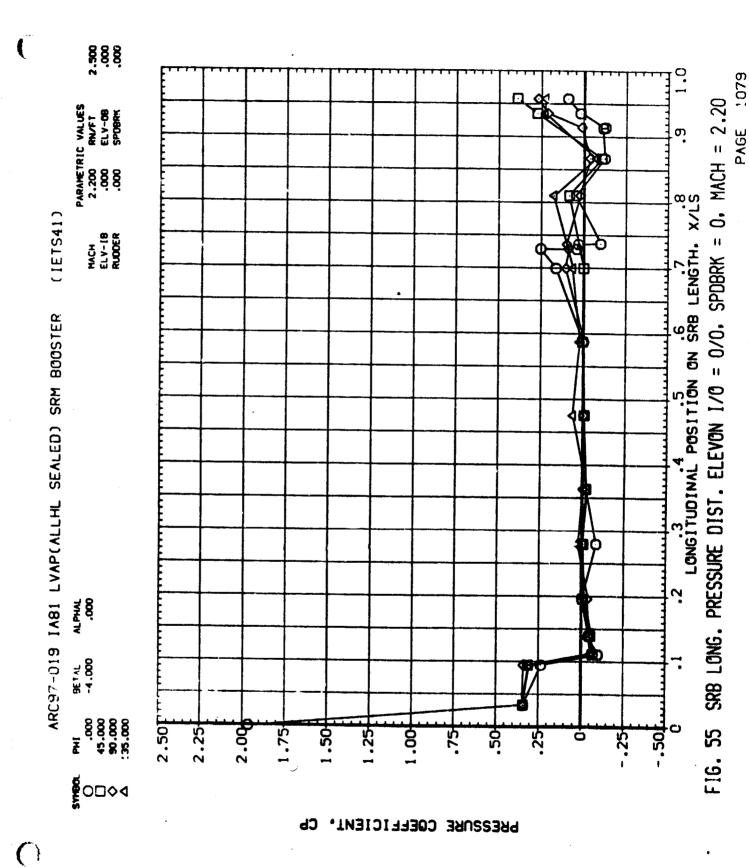
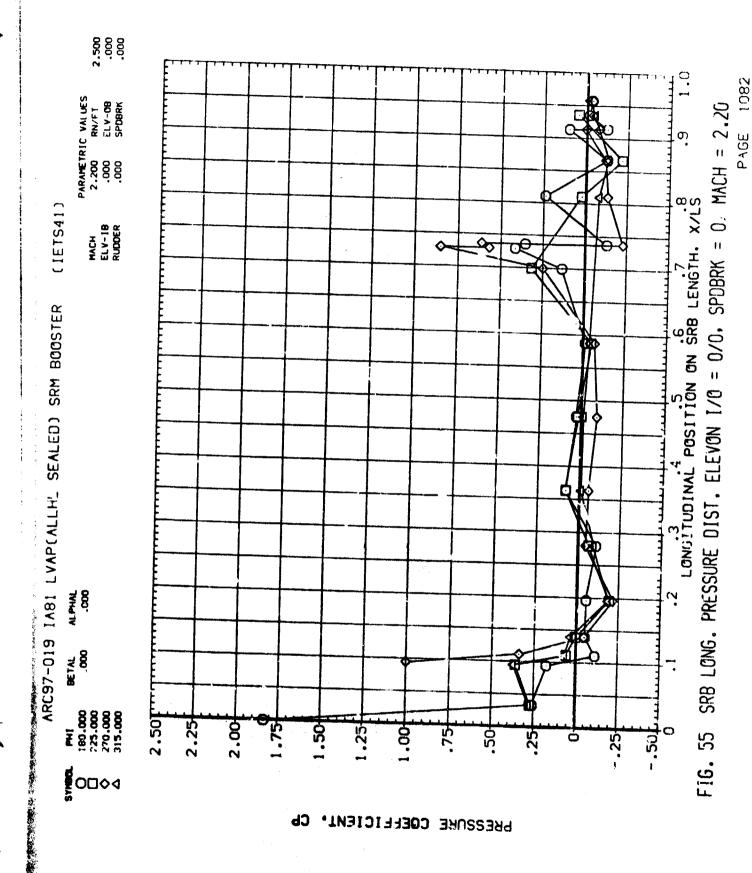
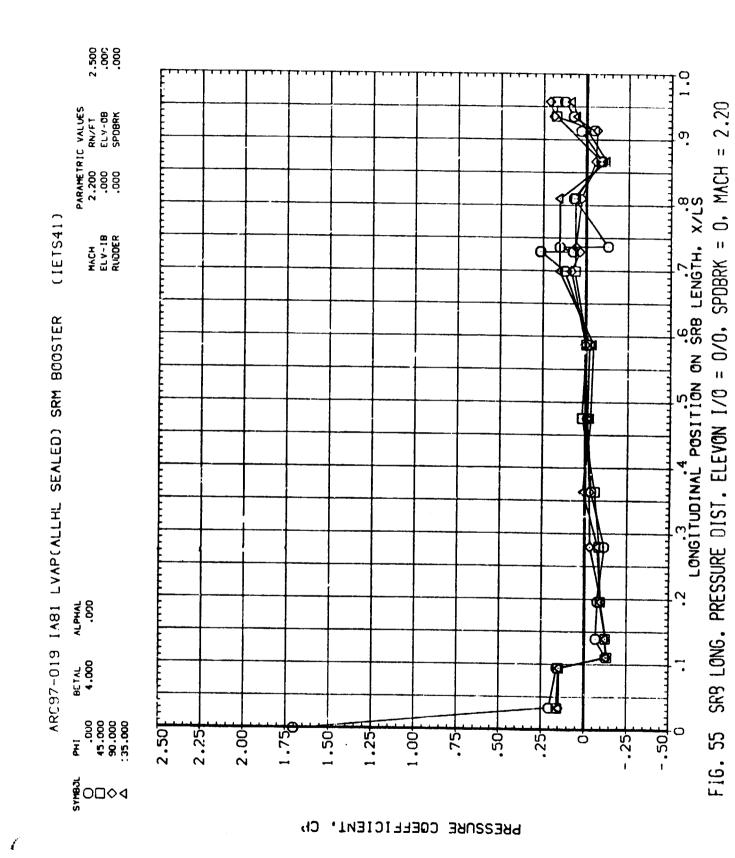


FIG. 55 SRB LONG, PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.20

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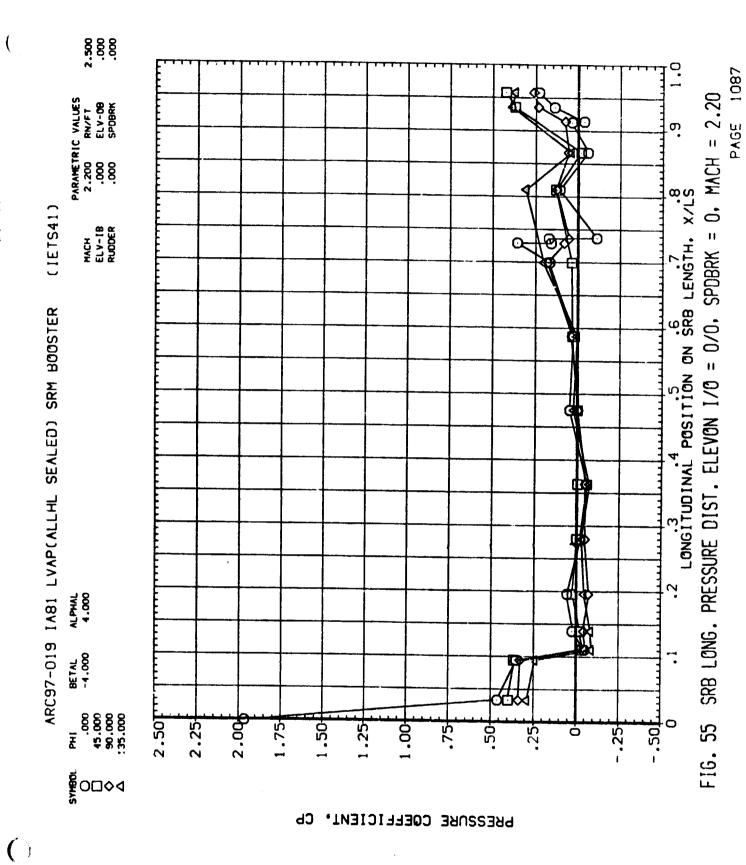


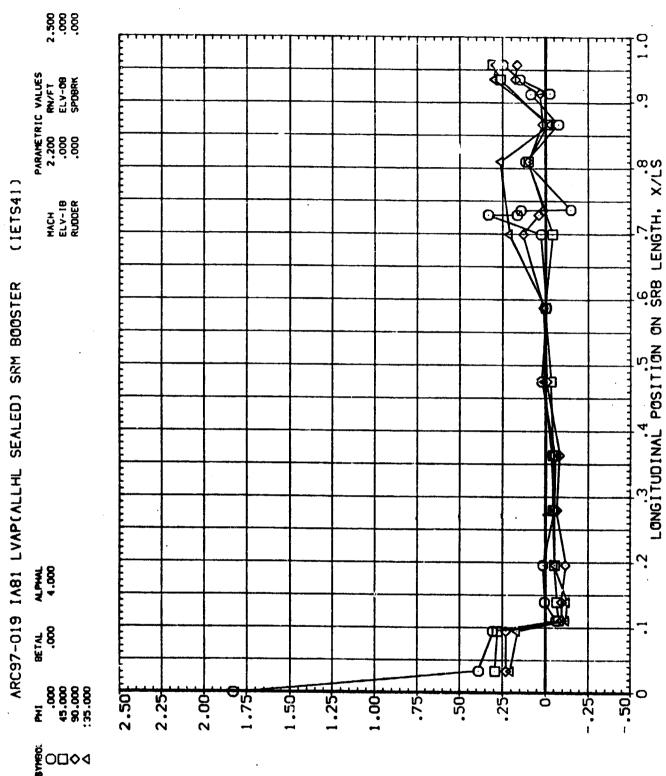
SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0. SPDBRK = 0. MACH = 2.20

FIG. 55

2.500 00.00 00.00 PARAMETRIC VALUES
2.200 RN/FT
.000 ELV-08 FIG. 55 SRB LONG. PRESSURE DIST. ELEVGN I/O = 0/0, SPDBRK = 0, MACH = 2.20 LONGITUDINAL POSITION ON SRB LENGTH, X/LS (IETS41) MACH ELV-18 RUDDER ARC97-019 IA81 LVAP(ALLHL SEALED) SRM BOOSTER ALPHAL .000 BETAL 6.000 3H1 :80.000 :25.000 270.000 315.000 2.50F 2.25 2.00 1.75 1.50 .75 i .25 1.00 .50 -.25 -.50 PRESSURE COEFFICIENT,

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PAGE 1089 FIG. 55 SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.20

2.500.000 PARAMETRIC VALUES 2.200 RN/FT .000 ELV-08 .000 SPDBRK SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0. SPDBRK = 0. MACH = 2.20 LONGITUDINAL POSITION ON SRB LENGTH, X/LS (IETS41) MACH ELV-18 RUDOER ARC97-019 IA81 LVAP(ALLHL SEALED) SRM BOOSTER ALPHAL 4.000 BETAL .000 PH1 :80,000 725,000 270,000 315,000 2.50F 2.25 FIG. 55 2.00 1.75 1.50 1.25 1.00 -.50 **№**0□◊4 PRESSURE COEFFICIENT,

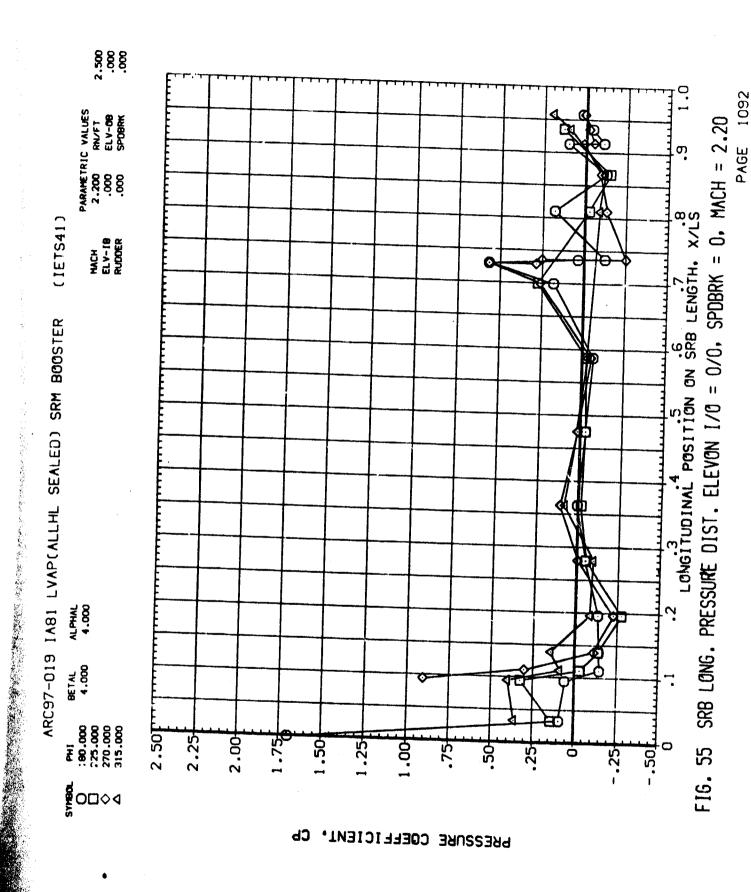
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2.500 PARAMETRIC VALUES 2.200 RN/FT .000 ELV-08 .000 SPDBRK LONGITUDINAL POSITION ON SRB LENGTH, X/LS (IETS41) HACH ELV-18 RUDDER ARC97-019 IA81 LVAP(ALLHL SEALED) SRM BOOSTER ALPHAL 4.000 BETAL 4.000 P31 .000 45.000 90.000 :35.000 2.50F 2.25 2.00 .50 1.00 .75 50 -.25 % O□◊4

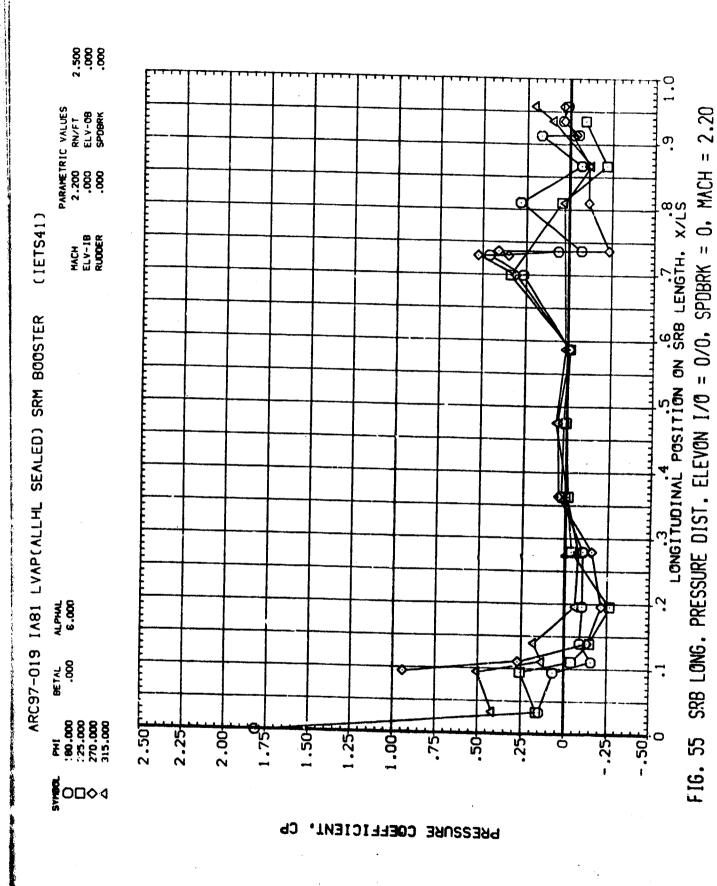
FIG. 55 SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.20

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PRESSURE COEFFICIENT, CP

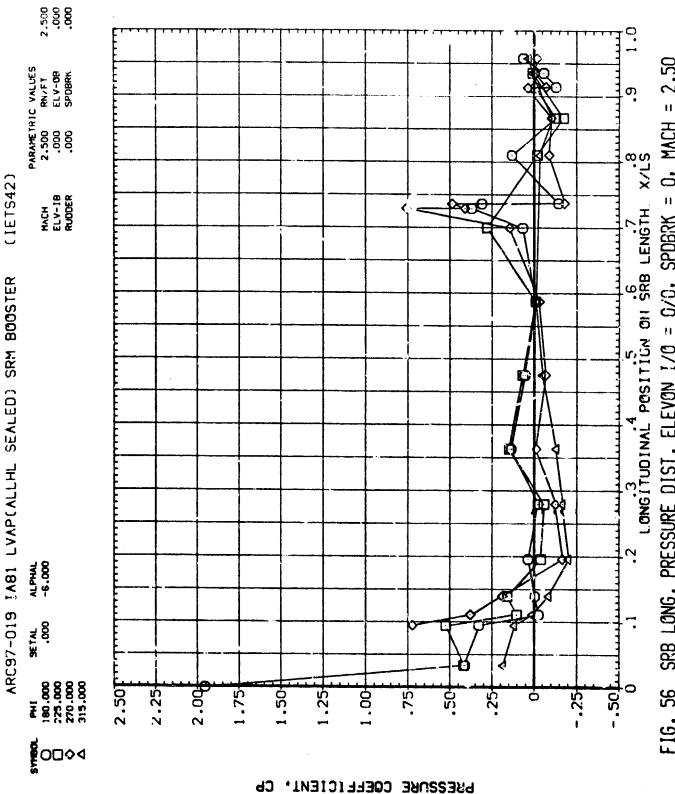


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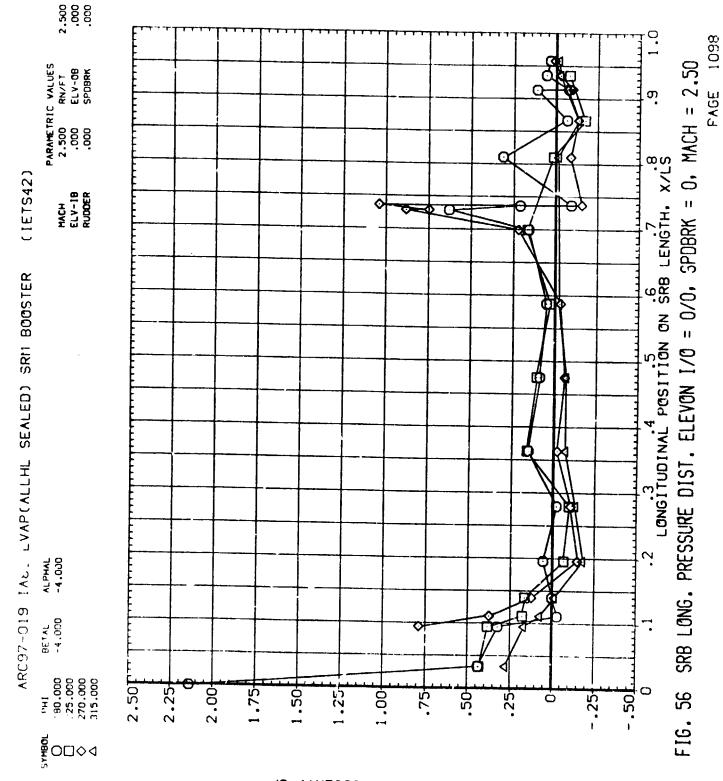
FIG. 56 SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.50



SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.50 F16.56

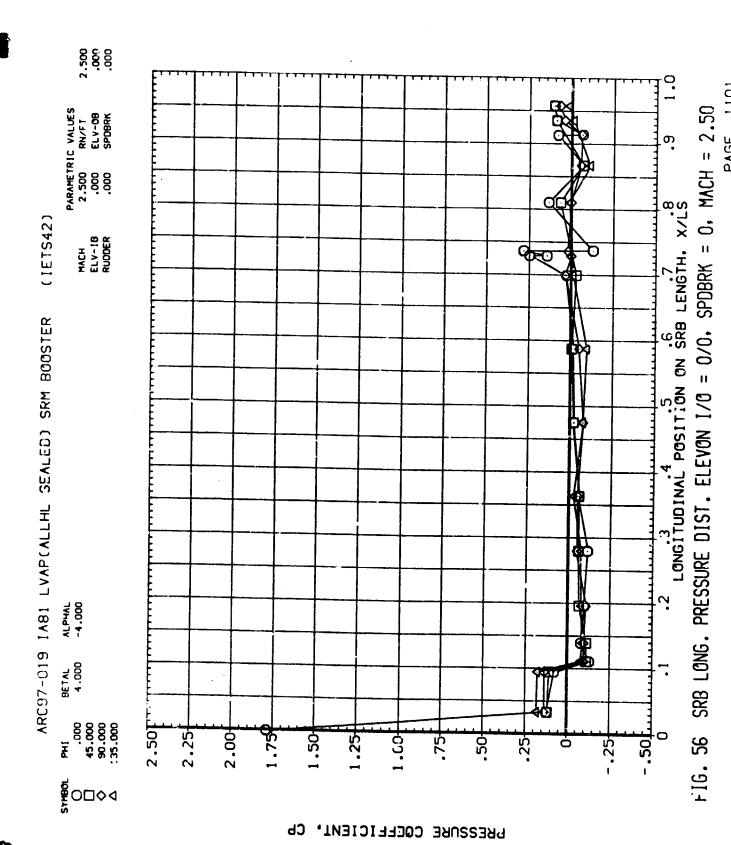
1096

FIG. 56 SKB LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPOBRK = 0, MACH = 2.50 PAGE 1097

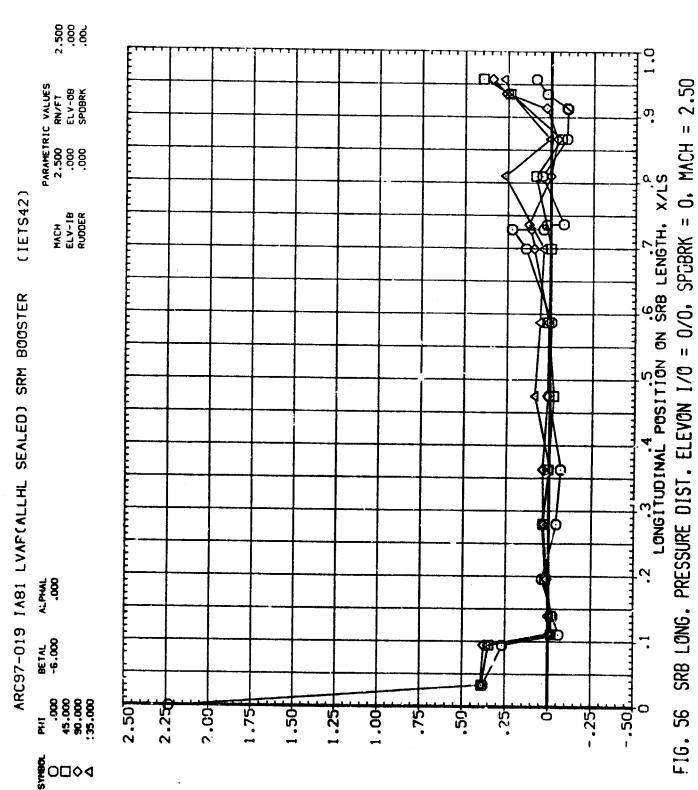


PRESSURE COEFFICIENT, CP

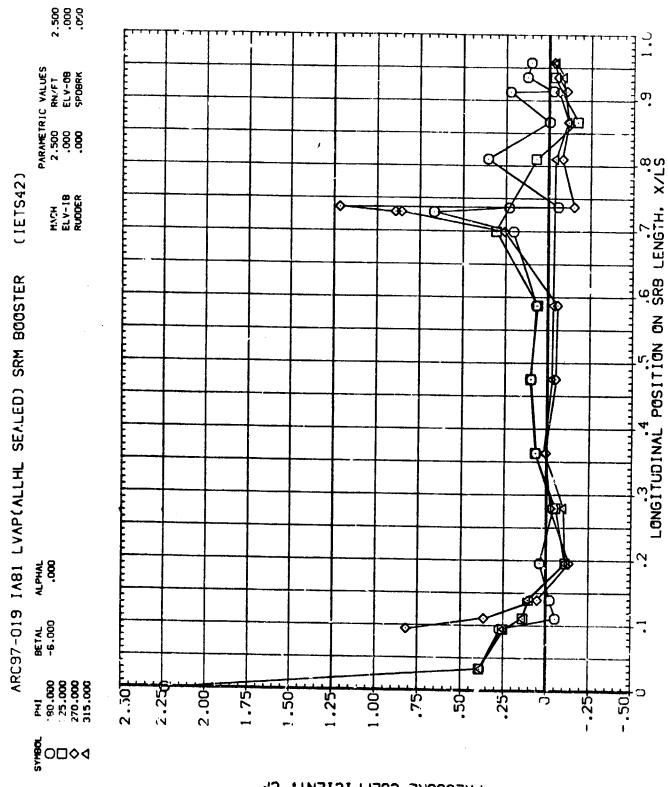
SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.50 FIG. 56



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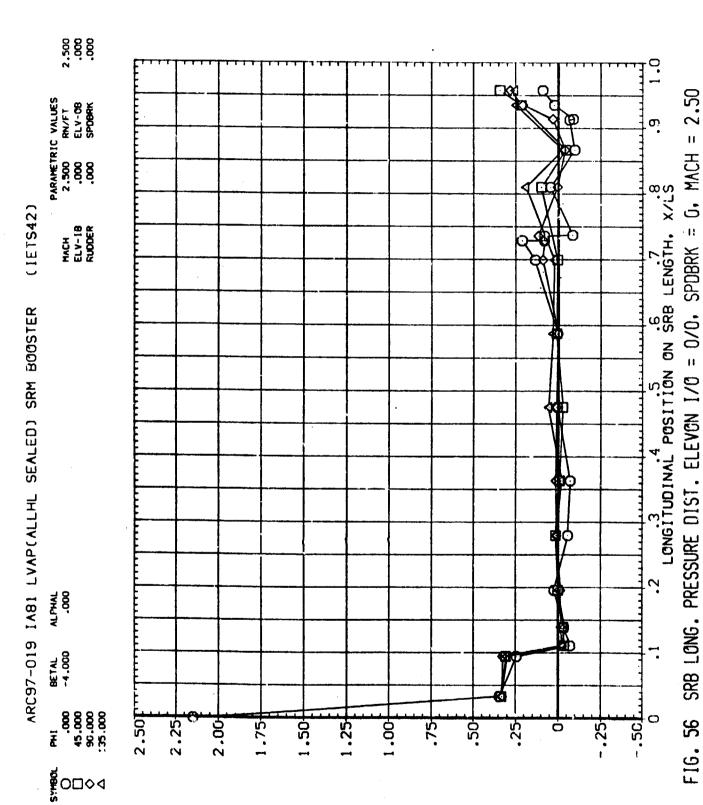
PRESSURE COEFFICIENT, CP



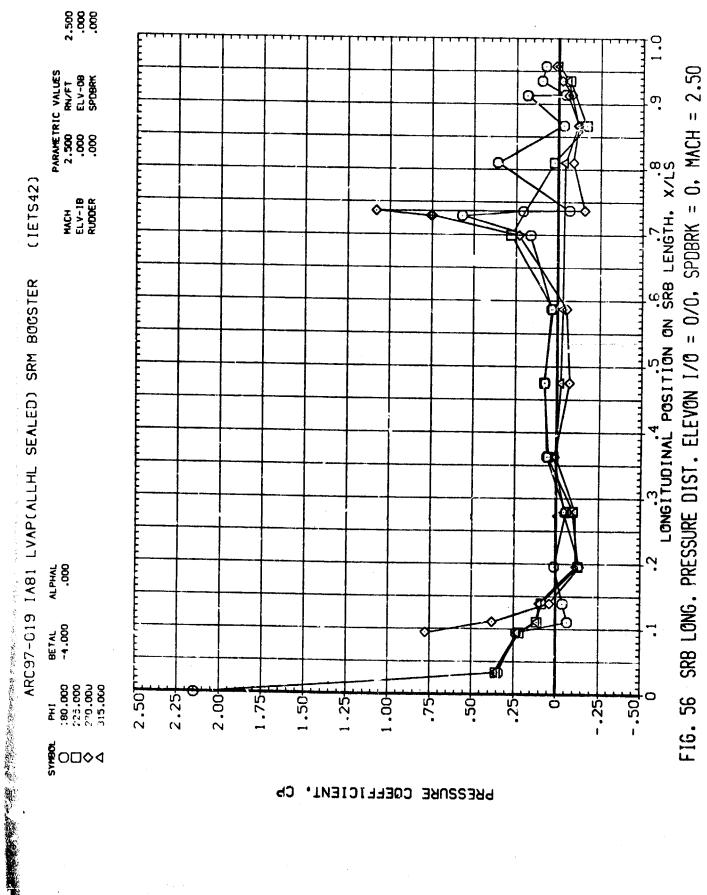
SR3 LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.50

FIG. 56

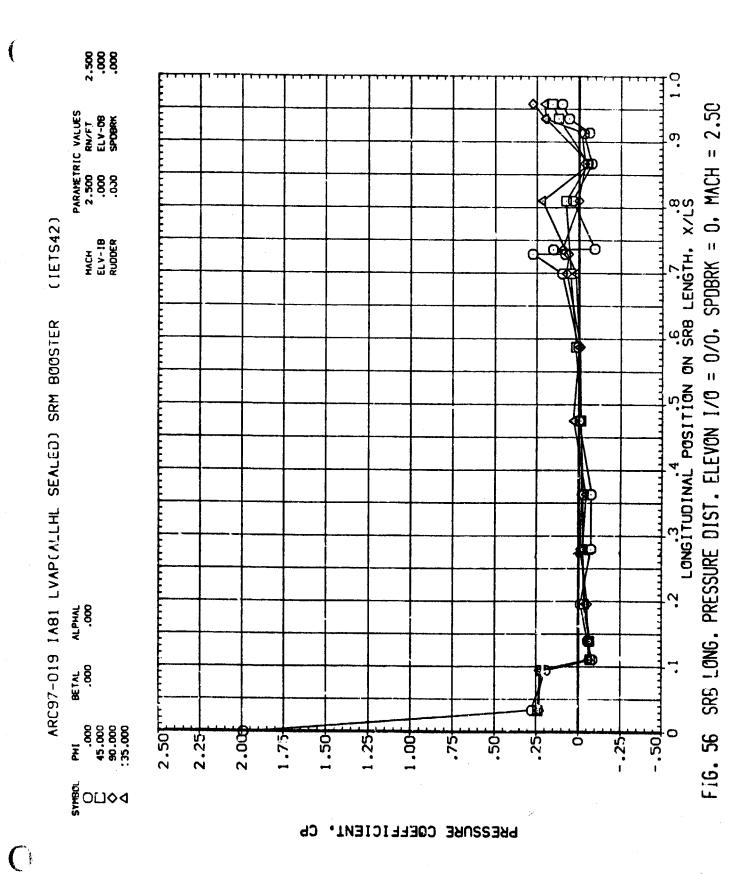
PRESSURE COEFFICIENT, CP

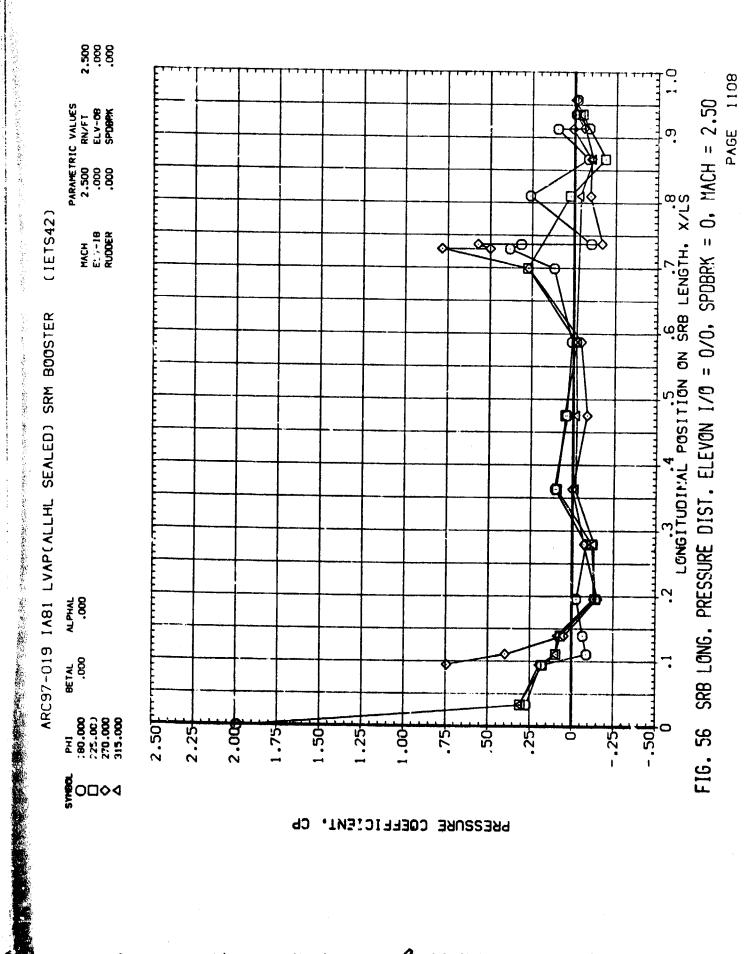


PRESSURE COEFFICIENT, CP



PRESSURE COEFFICIENT,





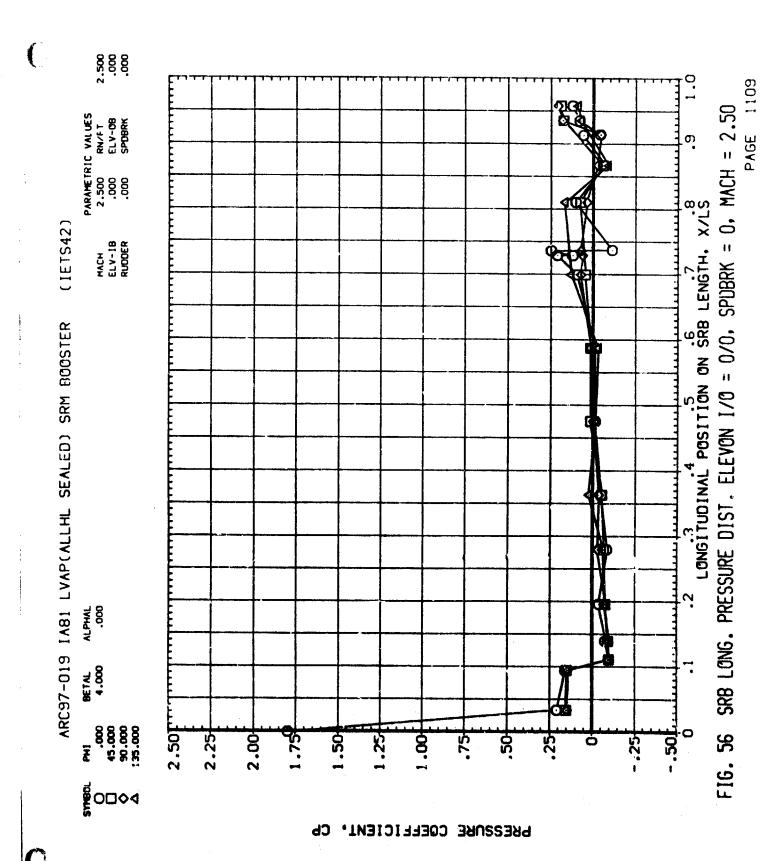
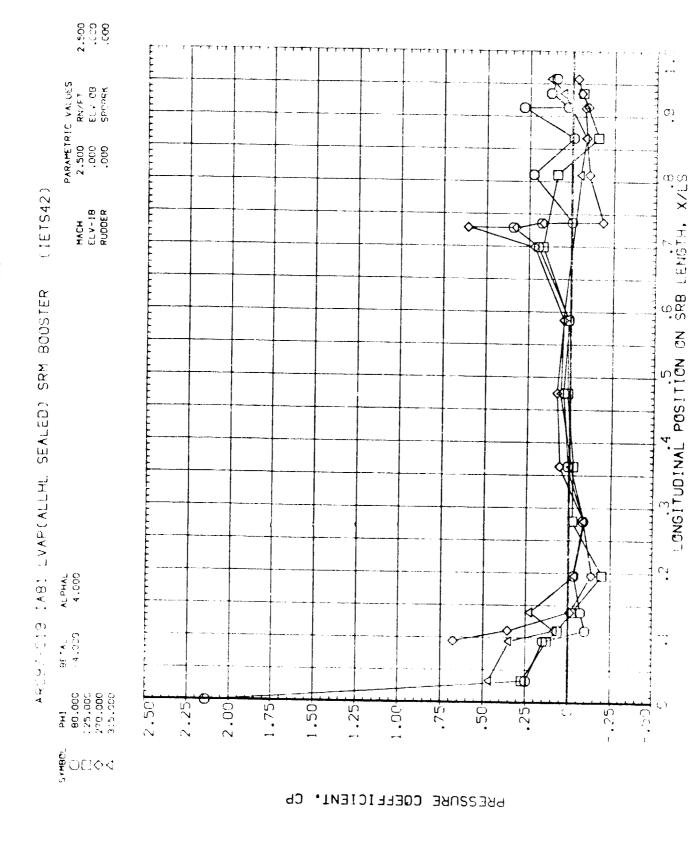


FIG. 56 SRB LONG. PRESSURE DIST. ELEVON I/0 = 0/0, SPDBRK = 0, MACH = 2.50

2.500 المحمية بالمرب المربعية وي المهيد المحيد إلماء ملامقيد إمياما المباريين المفرد إم مدياء مبدل بممل بيساء ورباً م PARAMETRIC VALUES 2.500 RNZFT ELV-3B SPUBRK 2.500 LONGITUCINAL POSITION ON SRB LENGTH, X/LS (IETS42) MACH ELV-18 RUDDER ARISZ-019 (A81 LVAPCALLHL SEALED) SRM BOOSTER ALPHAL .000 9ETAL 6.000 F.41 20.000 25.000 70.000 2.50 1.75 1.00+ 1.25 .75 .50 - 50 2.25 2.00 1.50 £ 0□◊4 PRESSURE COEFFICIENT.

PAGE SRB LONG. PRESSURE DIST. ELEVEN I/C = 0/0, SPDBRK = 0, MACH = 2.50 F16.56

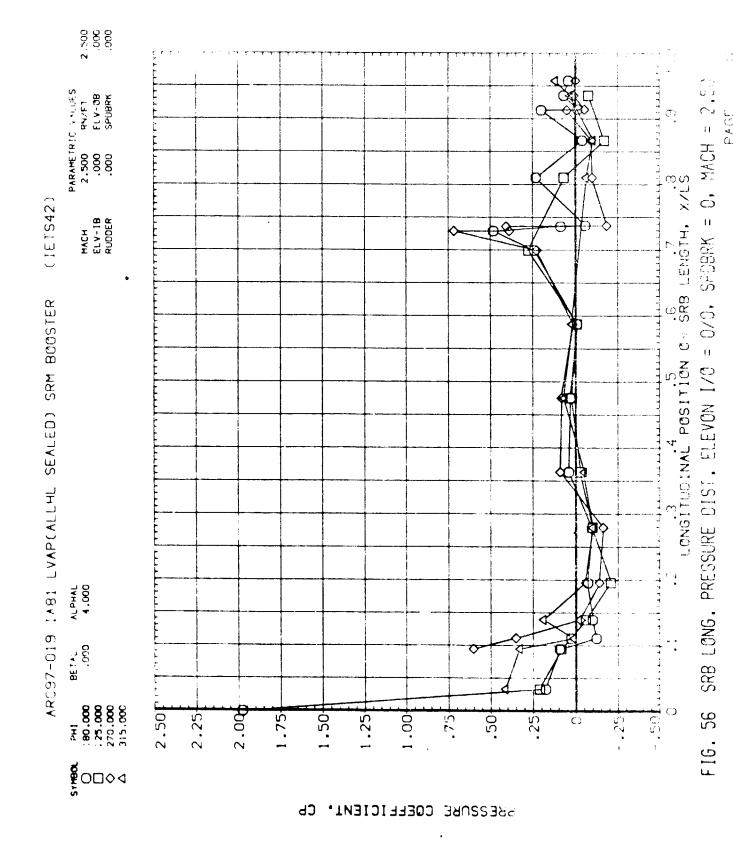
SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.50 FIG. 56

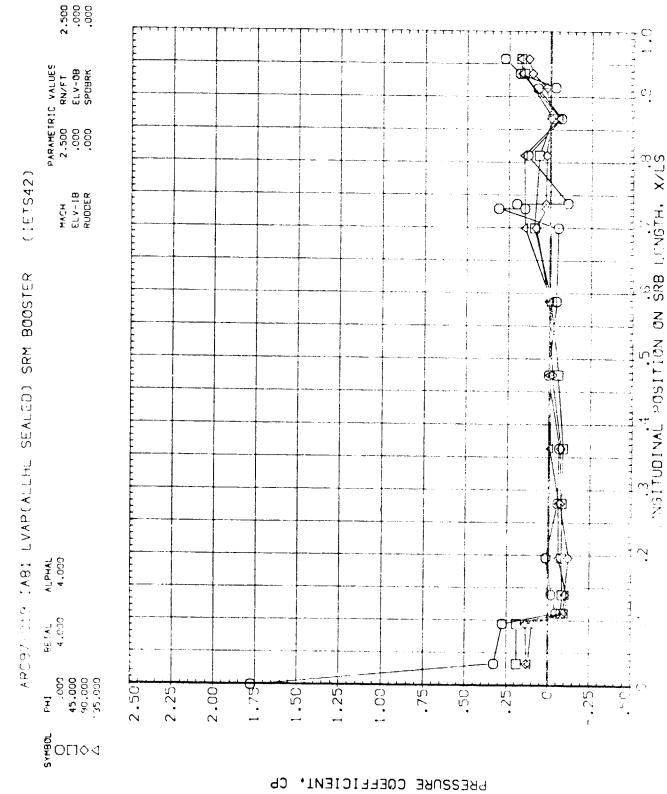


SRB LONG. PRESSURE DIST. ELEVON 170 = 070, SPBBRK = 0, MACH = 2,50 FIG. 58

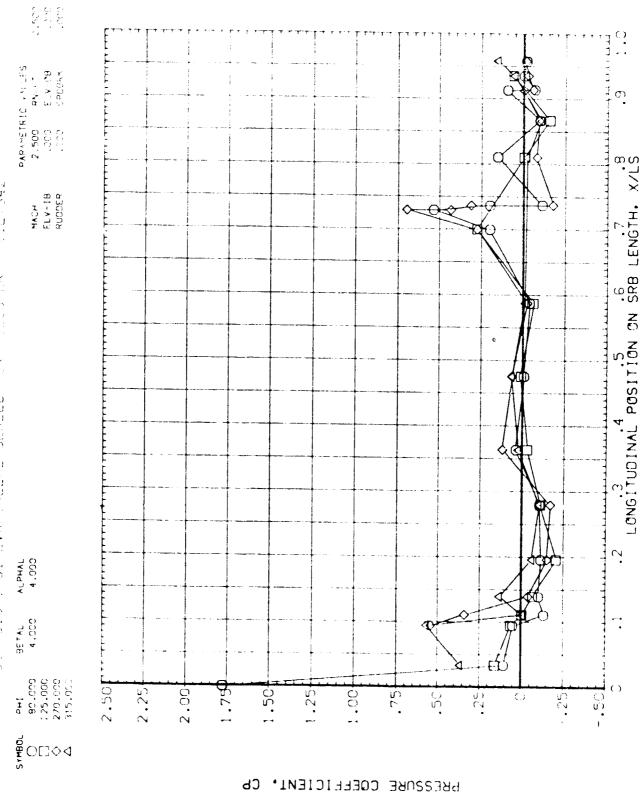
PAGE 1115

IG. 56 SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.50





CTO: PRESSURE DIST. ELEVON IZO = CZO, SPOBRK = 0, MACH = 2 رن دن F16. CR

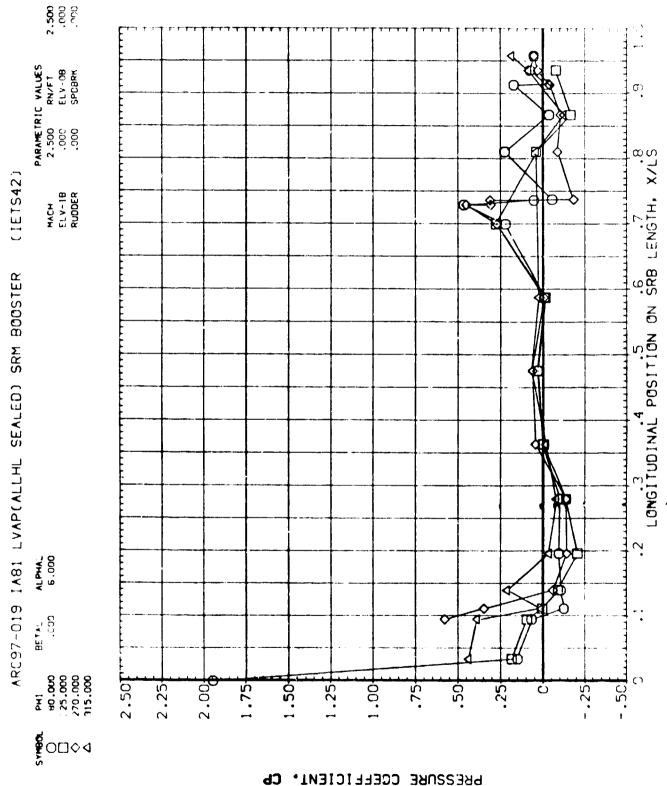


SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPDBRK = 0, MACH = 2.50

F16.56

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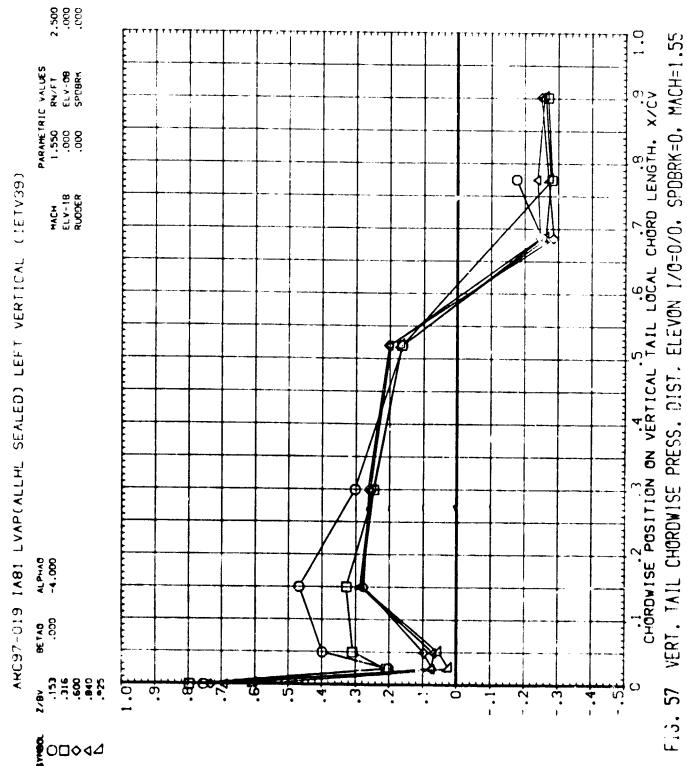
SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0, SPD3RK = 0, MACH = 2.50 FIG. 56



SRB LONG. PRESSURE DIST. ELEVON I/O = 0/0. SPDBRK = 0. MACH = 2.50 FIG. 56

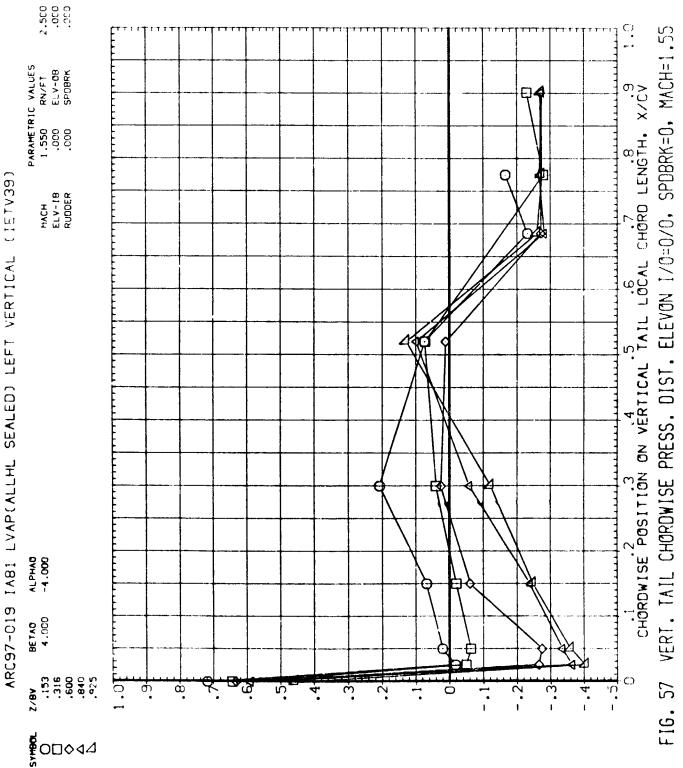
FIG. 57 VERT. TAIL CHOROWISE PRESS. DIST. ELEVON 1/0=0/0. SPOBRK=0. MACH=1.55

VERI. TAIL CHORDWISE PRESS. DIST. ELEVON 1/8=0/3, SPOBRK=0, MACH=1.55 FIG. 57



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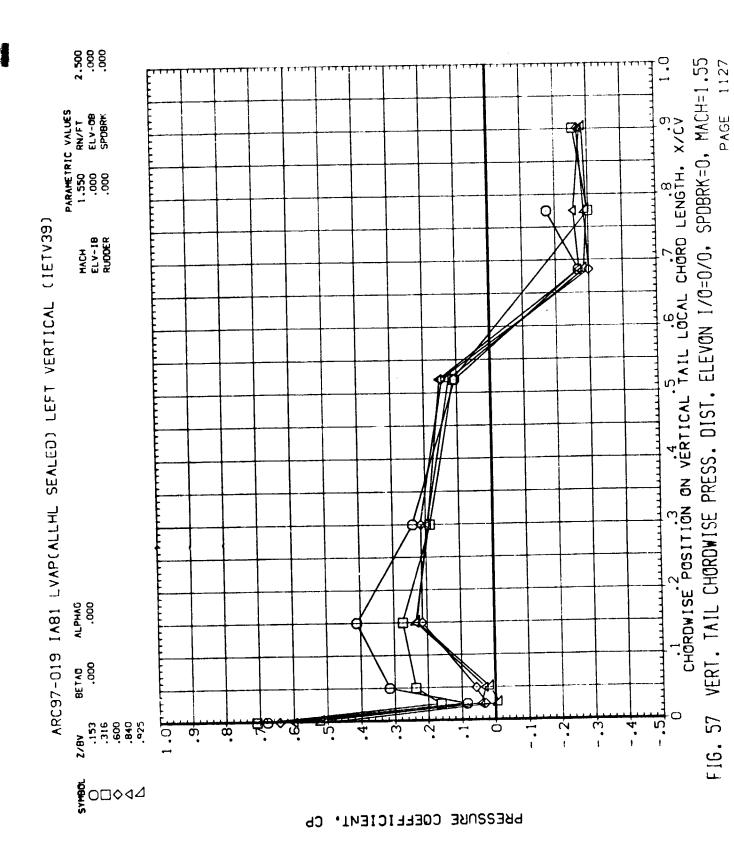
PRESSURE COEFFICIENT, CP

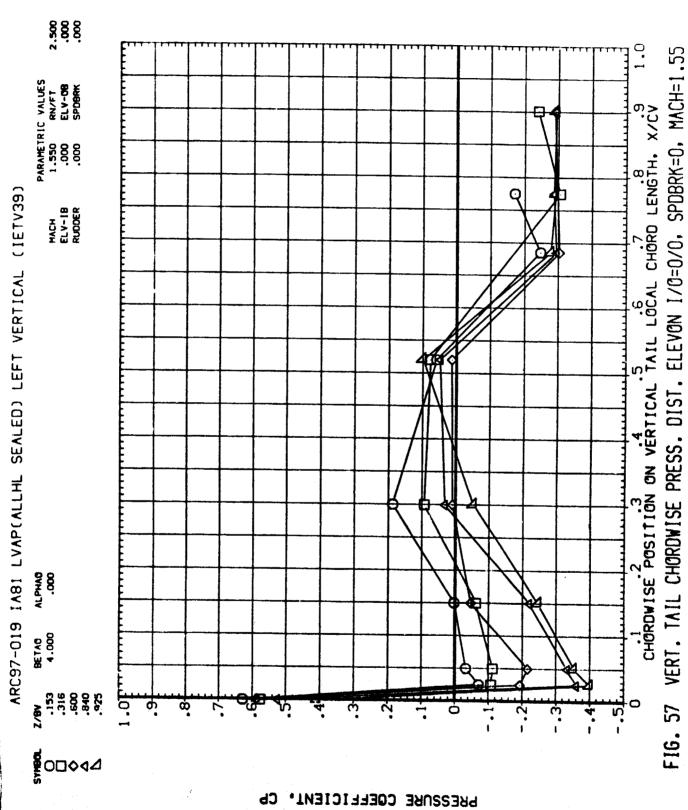


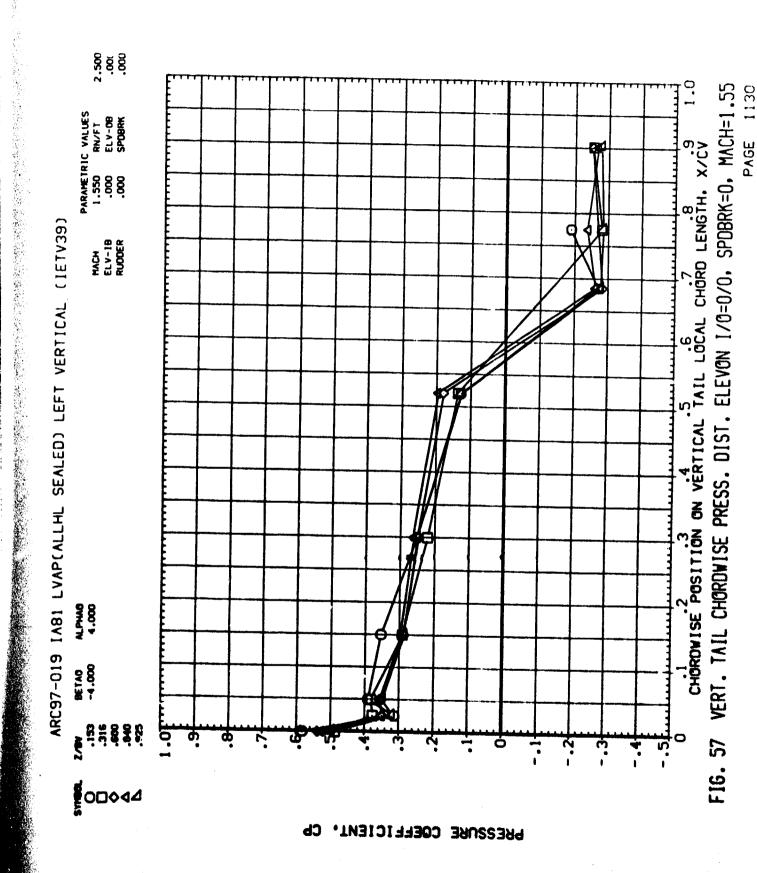
VERT. TAIL CHORDWISE PRESS. DIST. ELEVON I/0=0/0, SPDBRK=0, MACH=1.55

FIG. 57

VERT. TAIL CHORDWISE PRESS. DIST. ELEVON I/0=0/0, SPUBRK=0, MACH=1.55 CHORDWISE POSITION ON VERTICAL TAIL LOCAL CHORD LENGTH. X/CV FIG. 57







2.500. .000. PARAMETRIC VALUES 1.550 RN/FT .000 ELV-08 .000 SPOBRK ARC97-019 1A81 LVAP(ALLHL SEALED) LEFT VERTICAL (IETV39) MACH ELV-18 RUDOER ALPHA6 4.000 **8**ETAB 4.000 φ. 9 φ 00044 PRESSURE COEFFICIENT.

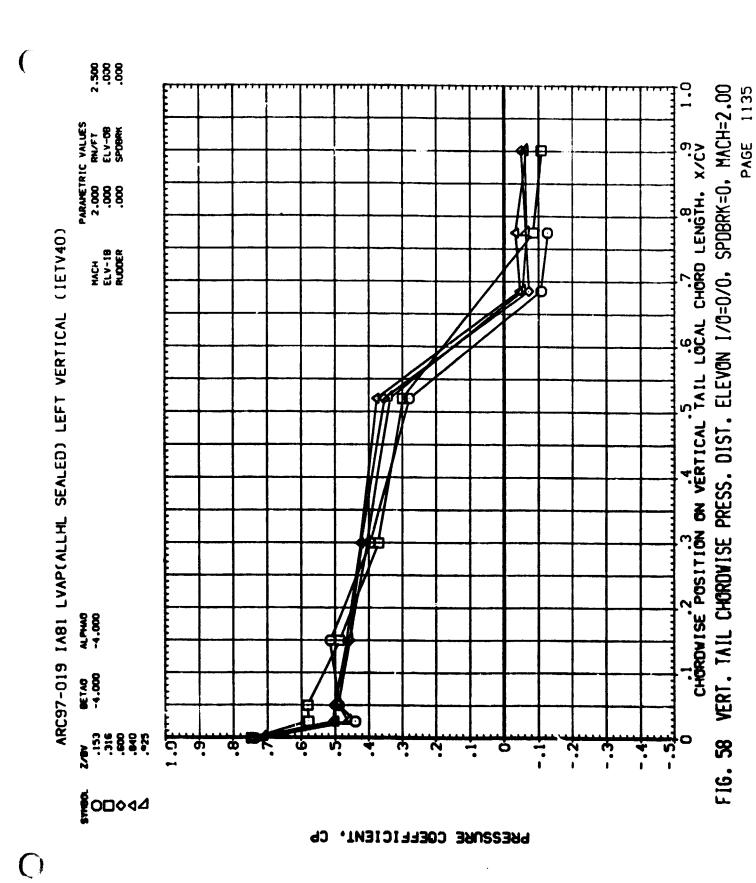
FIG. 57 VERT. TAIL CHORDWISE PRESS. DIST. ELEVON 1/0=0/0. SPDBRK=0. MACH=1.55 PAGE 1132

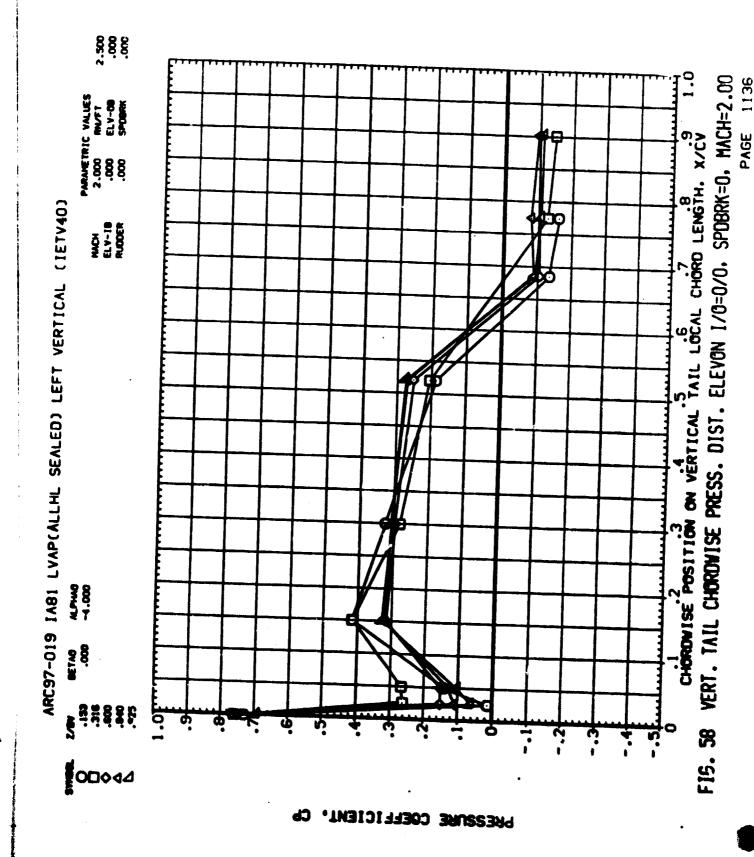
CHORDWISE POSITION ON VERTICAL TAIL LOCAL CHORD LENGTH. X/CV

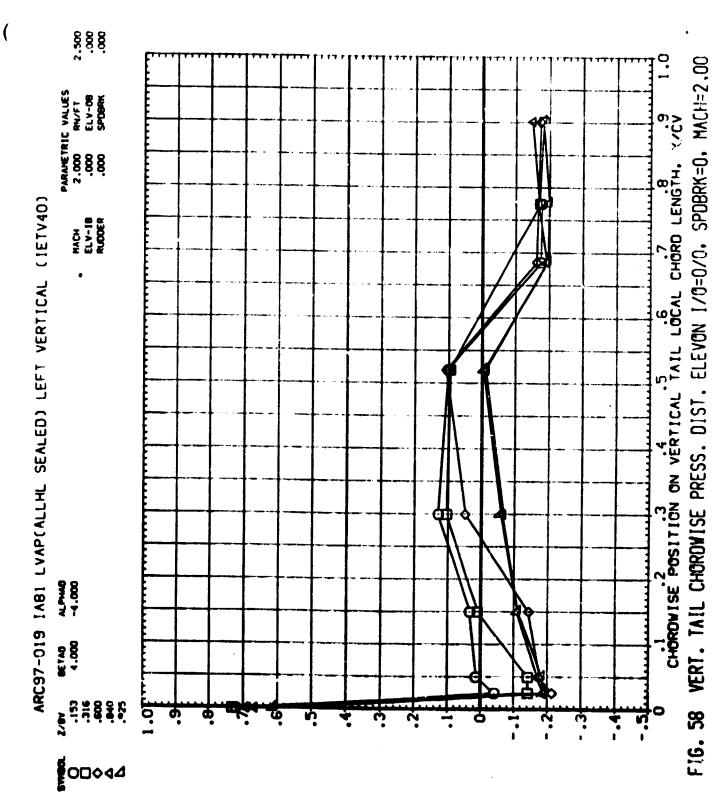
2.50 0.00 0.00 PARAMETRIC VALUES
1.550 RN/F1
.000 ELV-08
.000 SP08RK CHORDWISE POSITION ON VERTICAL TAIL LOCAL CHORD LENGTH. X/CV Q ARC97-019 IA81 LVAP(ALLHL SEALED) LEFT VERTICAL (IETV39) MACH ELV-18 RUDOER ALPHA0 6.000 **96** 146 000. 4 A æ **₹**0□**◊**��

FIG. 57 VERT. TAIL CHORDWISE PRESS. DIST. ELEVON I/O=0/0. SPOBRK=0. MACH=1.55 PAGE 1133

2.500 .000 .000 VERT. TAIL CHORDWISE PRESS. DIST. ELEVON I/0=0/0, SPDBRK=0, MACH=2.00 PARAMETRIC VALUES 2.000 RN/FT .000 ELV-08 .000 SP09RK CHORDVISE POSITION ON VERTICAL TAIL LOCAL CHORD LENGTH. X/CV ARC97-019 IA81 LVAP(ALLHL SEALED) LEFT VERTICAL (IETV40) MACH ELV-18 RUDDER ALPAND -6.000 9ETAG .000 9 FIG. 58 -.2 **€**0□◊44 PRESSURE COEFFICIENT.







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PRESSURE COEFFICIENT, CF

O

2.500 PARAMETRIC VALUES 2.000 RN/FT .000 ELV-08 .000 SPDBRK CHORDWISE COSITION ON VERTICAL TAIL LOCAL CHORD LENGTH, X/CV Q ARC97-019 IA81 LVAP(ALLHL SEALED) LEFT VERTICAL (IETV40) MACH ELV-19 RUDDER ALPHAG. BETAG -6.000 2/8v .153 .316 .600 .840 φ. <u>.</u> PRESSURE COEFFICIENT,

VERT. TAIL CHORDVISE PRESS. DIST. ELEVON I/0=0/0. SPDBRK=0. MACH=2.00 PAGE 1138 FIG. 58

2.500 PARAMETRIC VALUES 2.000 RN/FT .000 ELV-08 CHORDWISE POSITION ON VERTICAL TAIL LOCAL CHORD LENGTH, X/CV P ARC97-019 IA81 LVAP(ALLHL SEALED) LEFT VERTICAL (IETV40) MACH ELV-18 RUDDER ALPHA0. 9£7A6 -4.000 1.0F 8 3 8 8 6 000044

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VERT. TAIL CHORDWISE PRESS. DIST. ELEVON I/0=0/0, SPOBRK=0, MACH=2.00 FIG. 58

ARC97-019 IA81 LVAP(ALLHL SEALED) LEFT VERTICAL (IETV40)

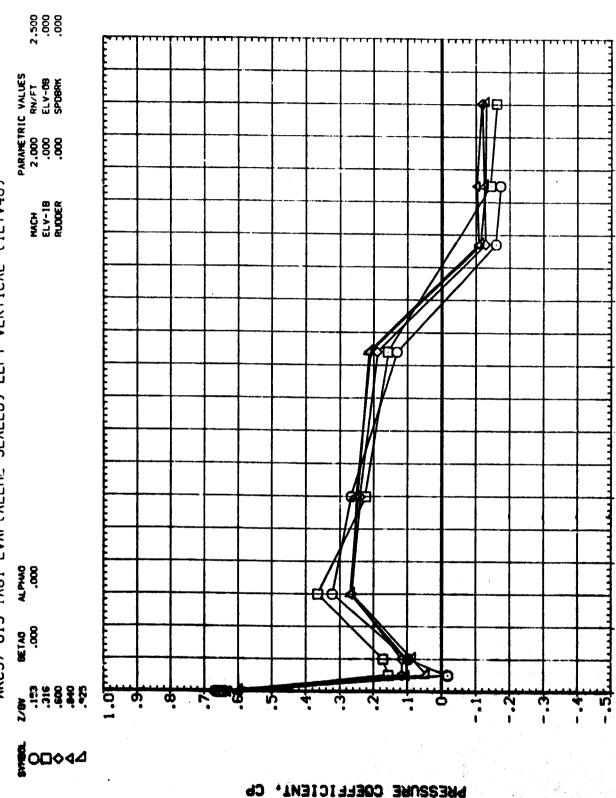
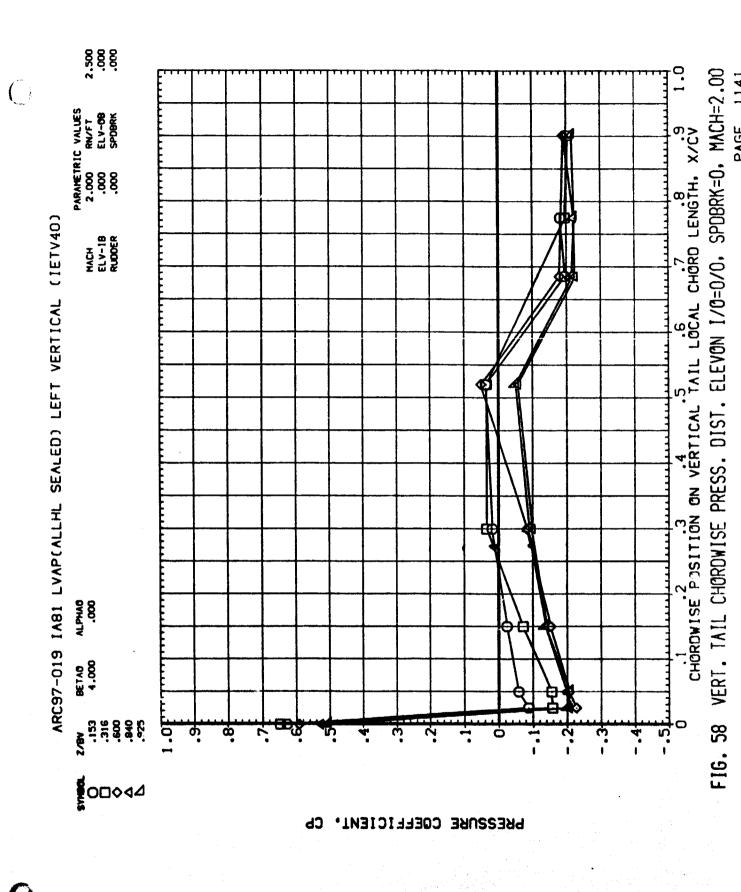


FIG. 58 VERT. TAIL CHORDWISE PRESS. DIST. ELEVON 1/0=0/0. SPOBRK=0. MACH=2.30 CHORDWISE POSITION ON VERTICAL TAIL LOCAL CHORD LENGTH. X/CV



2. 00.00 00.00 PARAMETRIC VALUES 2.000 RN/FT .000 ELV-08 CHORDWISE POSITION ON VERTICAL TAIL LOCAL CHORD LENGTH. X/CV ARC97-019 IA81 LVAP(ALLHL SEALED) LEFT VERTICAL (IETV40) HACH ELV-18 RUDDER Q ALPHAG. BETAG 6.000 2/8/ 153 316 316 600 600 629 1.0F 15 φ. φ **€**0□◊44 PRESSURE COEFFICIENT.

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PAGE

VERT. TAIL CHORDWISE PRESS. DIST. ELEVON I/0=0/0, SPDRRK=0, MACH=2.00

F16. 58

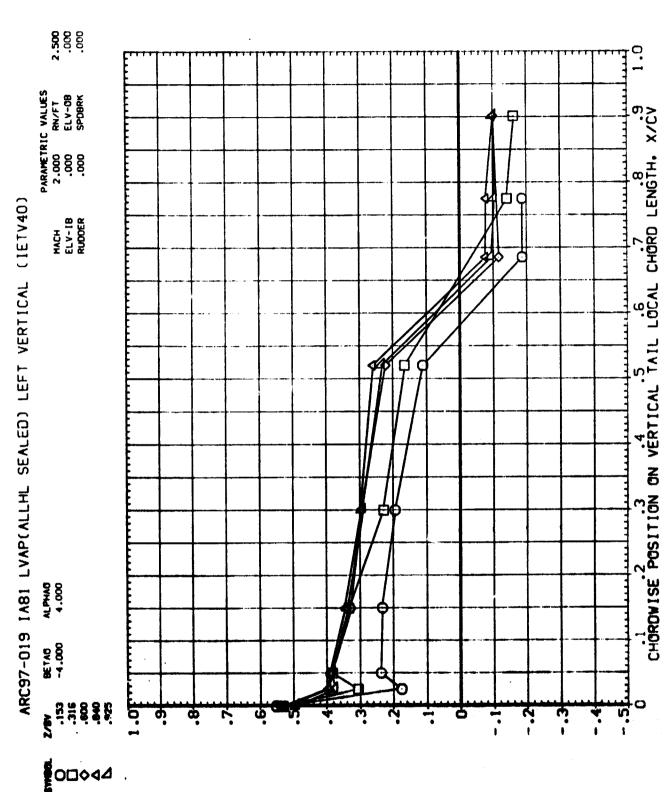
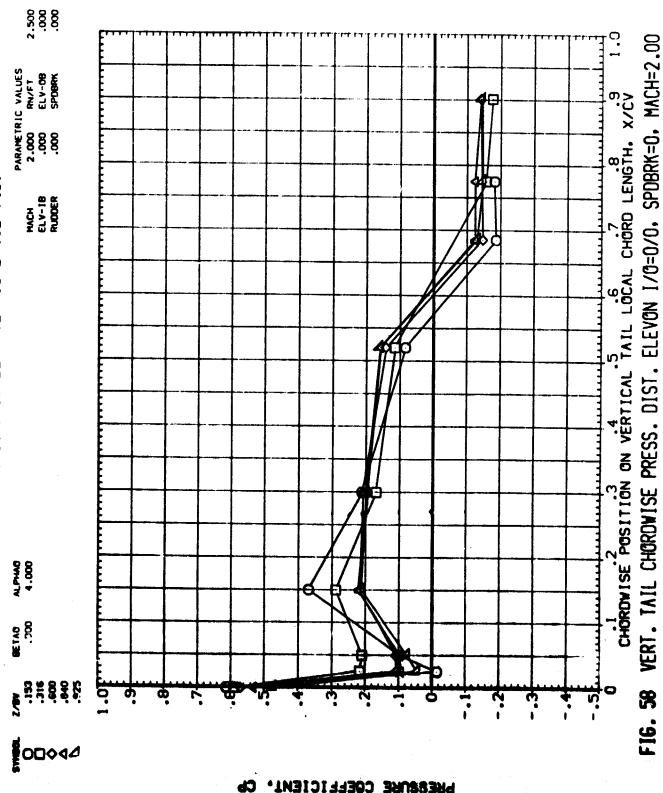
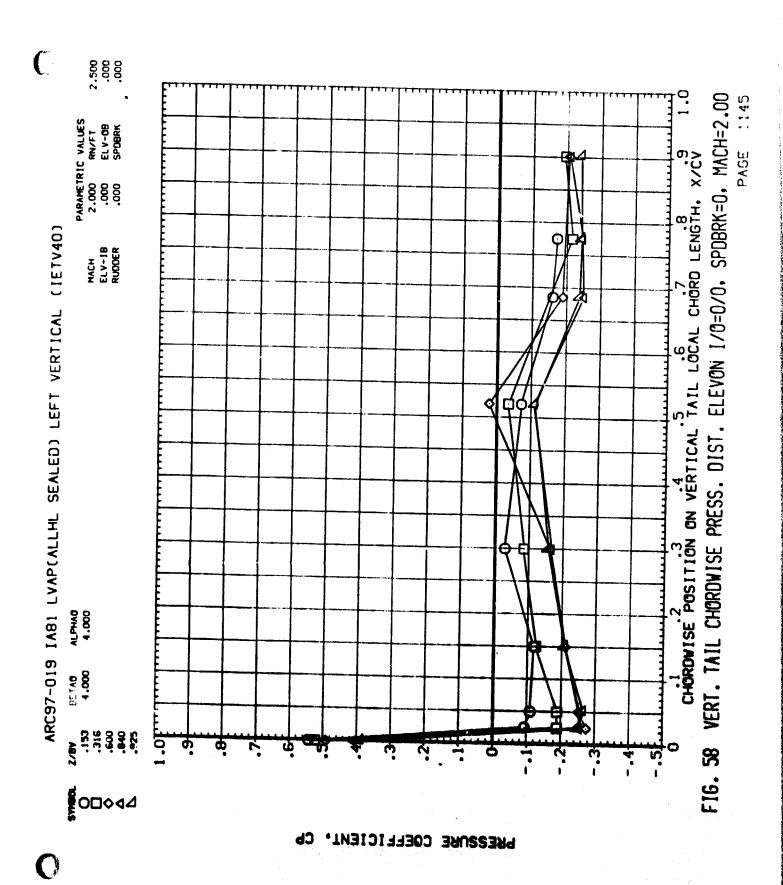


FIG. 58 VERI. TAIL CHORDWISE PRESS. DIST. ELEVON 1/0=0/0. SPDBRK=0. MACH=2.00

ARC97-019 IA81 LVAP(ALLHL SEALED) LEFT VERTICAL (IETV40)

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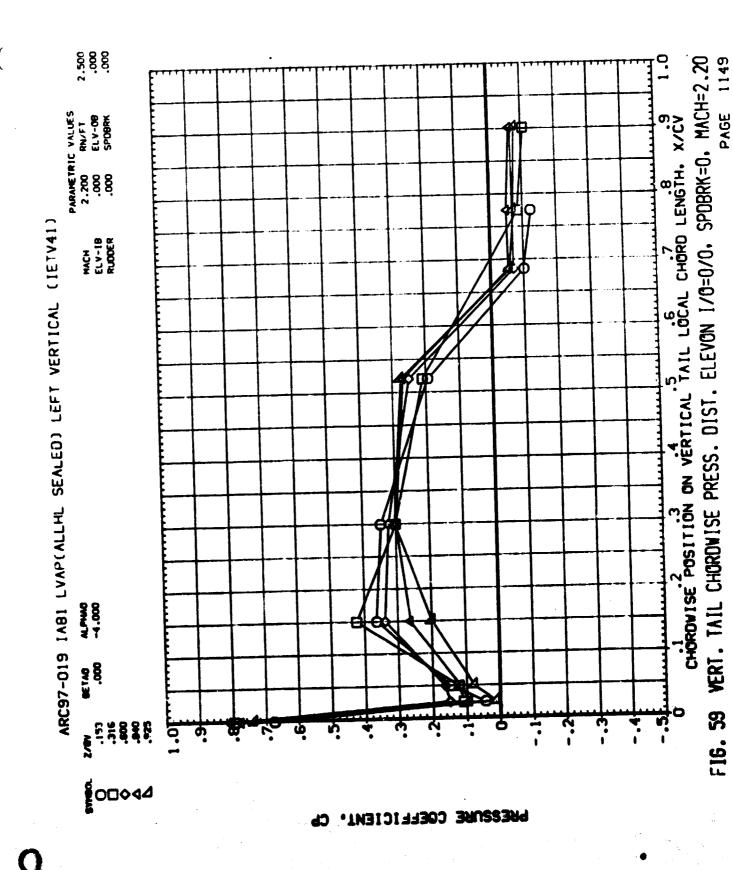
2.500. PARAMETRIC VALUES 2.000 RN/FT .000 ELV-08 CHORDWISE POSITION ON VERTICAL TAIL LOCAL CHORD LENGTH, X/CV ARC97-019 IA81 LVAP(ALLHL SEALED) LEFF VERTICAL (IETV40) NACH ELV-18 RUDDER BETAG .000 ر 4.

VERT. TAIL CHORDWISE PRESS. DIST. ELEVON 1/0=0/0, SPOBRK=0, MACH=2.00 F16. 58

2.500 .000 FIG. 59 VERT. TAIL CHORDWISE PRESS. DIST. ELEVON I/0=0/0. SPDBRK=0. MACH=2.20 PARAMETRIC VALUES 2.200 RN/FT .000 ELV-08 .000 SPORM CHORDWISE POSITION ON VERTICAL TAIL LOCAL CHORD LENGTH. X/CV 400 ARC97-019 IABI LVAP(ALLHL SEALED) LEFT VERTICAL (IETV41) MACH ELV-18 RUDDER ALPHA0 -6.000 9E TAG .000 00044 PRESSURE COEFFICIENT.

2 8 9 9 9 PARAMETRIC VALUES 2.200 RN/FT .000 ELV-08 .000 SPDBHK CHORDVISE POSITION ON VERTICAL TAIL LOCAL CHORD LENGTH. X/CV ARC97-019 1A81 LVAP(ALLHL SEALED) LEFT VERTICAL (IETV41) MACH ELV-18 RUDDER ALPHA6 #ETAG <u>e. .</u> 4. -

FIG. 59 VERT. TAIL CHORDVISE PRESS. DIST. ELEVON 1/0=0/0. SPOBRK=0. MACH=2.20



VERT. TAIL CHOROWISE PRESS. DIST. ELEVON I/0=0/0. SPOBRK=0. MACH=2.20 PAGE 1150 F16. 59

(**%** 8 8 WERT. TAIL CHOROWISE PRESS. DIST. ELEVON I/0=0/0. SPOBRK=0. MACH=2.20 PARAMETRIC VALUES 2.200 RN/FI .000 ELV-08 CHORDWISE POSITION ON VERTICAL TAIL LOCAL CHORD LENGTH. X/CV ARC97-019 1A81 LVAP(ALLH SEALED) LEFT VERTICAL (IETV41) MACH ELV-18 RUDDER 986 6.000 F16. 59 **₹**0□**◊**4⊿

2.500 PARAMETRIC VALUES 2.200 RN/FT .000 ELV-08 CHORDVISE POSITION ON VERTICAL TAIL LOCAL CHORD LENGTH, X/CV ARC97-019 IAB1 LVAP(ALLHL SEALED) LEFT VERTICAL (IETV41) MACH ELV-18 RUDDER ALPHAO. 4.000 00044 PRESSURE COEFFICIENT.

PAGE 1154

VERT. TAIL CHORDVISE PRESS. DIST. ELEVON 1/0=0/0, SPDBRK=0, MACH=2.20

F16. 58

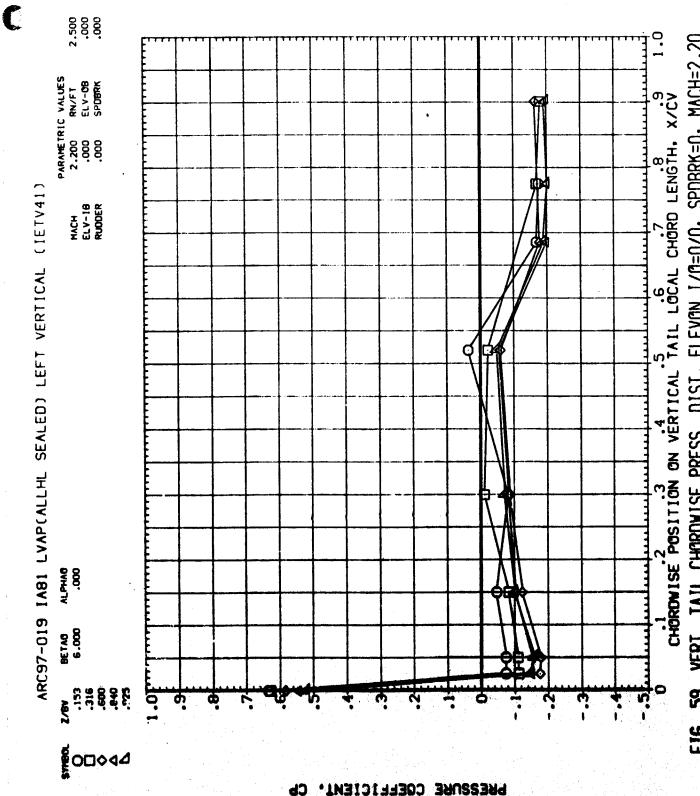


FIG. 59 VERT. TAIL CHORDWISE PRESS. DIST, ELEVON 1/0=0/0, SPDBRK=0, MACH=2.20 PAGE 1155

2.500 VERT. TAIL CHORDWISE PRESS. DIST. ELEVON 1/0=0/0, SPUBRK=0, MACH=2.20 PARAMETRIC VALUES
2.200 RN/FT
.000 ELV-08
.000 SPDBRK CHORDWISE POSITION ON VERTICAL TAIL LOCAL CHORD LENGTH, X/CV ARC97-019 1A81 LVAP(ALLHL SEALED) LEFT VERTICAL (IETV41) MACK ELV-18 RUDDER F16. 59 00044 PRESSURE COEFFICIENT,

PRESSURE COEFFICIENT.

2.500 PARAMETRIC VALUES 2.200 RN/FT .000 ELV-08 CHORDWISE POSITION ON VERTICAL TAIL LOCAL CHORD LENGTH. X/CV ARC97-019 IA81 LVAP(ALLHL SEALED) LEFT VERTICAL. (IETV41) MACH ELV-18 RUDDER ALPHAD 4.000 4.000 4.000

WERT. TAIL CHORDWISE PRESS. DIST. ELEVON 1/0=0/0, SPDBRK=0, MACH=2.20

F16. 59

2.500 CHORDWISE POSITION ON VERTICAL TAIL LOCAL CHORD LENGTH. X/CV ARC97-019 IA81 LVAP(ALLHL SEALED) LEFT VERTICAL (IETV41) MACH ELV-1B RUDDER ALPHAG 6.000 9ETAG .000 **ल** । 4.1 00044

FIG. 59 VERT. TAIL CHORDWISE PRESS. DIST. ELEVON 1/0=0/0. SPDBRK=0. MACH=2.20 PAGE 1159

2.500 PARAMETRIC VALUES 2.500 RN/F1 .000 ELV-08 ARC97-019 IA81 LVAP(ALLHL SEALED) LEFT VERTICAL (IETV42) MACH ELV-1B RUDDER ALPHA6 -6.000 **BETAG** .000 40 000044

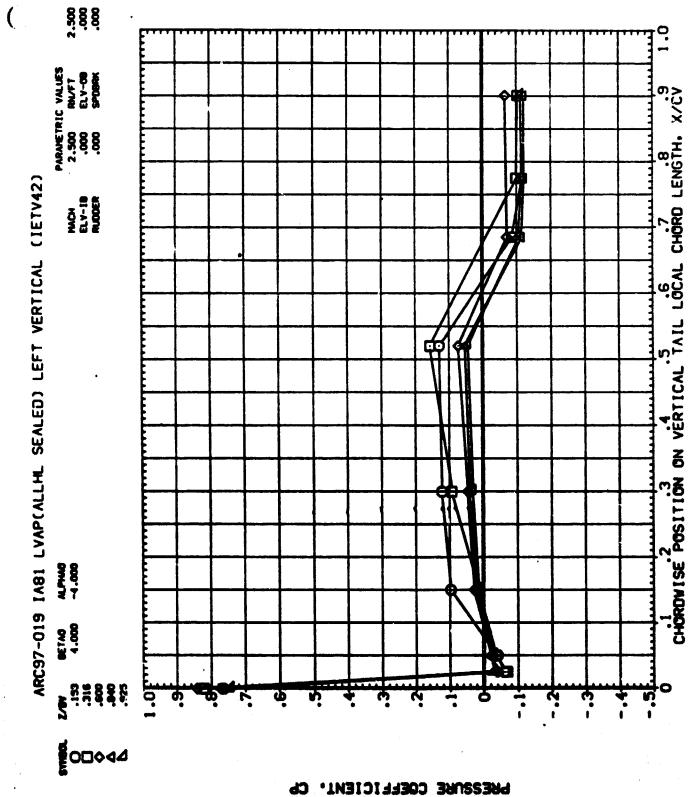
VERT. TAIL CHORDWISE PRESS. DIST. ELEVON 1/0=0/0, SPDBRK=0, MACH=2.50 CHORDWISE POSITION ON VERTICAL TAIL LOCAL CHORD LENGTH, X/CV F16. 80

2.50 9.90 9.00 9.00 VERT. TAIL CHORDWISE PRESS. DIST. ELEVON I/0=0/0. SPOBRK=0. MACH=2.50 PARAMETRIC VALUES 2.500 RN/FT .000 ELV-08 .000 SPDBRK CHORDWISE POSITION ON VERTICAL TAIL LOCAL CHORD LENGTH. X/CV þφ ARC97-019 IA81 LVAP(ALLHL SEALED) LEFT VERTICAL (IETV42) MACH ELV-18 RUDDER ALPHA6 -4.000 4.000 F16. 60 **€**. 1.4 **E**0□◊44

1161

2.50 9.90 9.00 9.00 PARAMETRIC VALUES
2.500 RN/FT
.000 ELV-08
.000 SPDBRK ARC97-019 1A81 LVAP(ALLHL SEALED) LEFT VERTICAL (IETV42) MACH ELV-18 RUDDER .000 000044 RESSURE COEFFICIENT.

VERT. TAIL CHORDWISE PRESS. DIST. ELEVON I/0=0/0. SPOBRK=0. MACH=2.50 PAGE 1162 CHORDWISE POSITION ON VERTICAL TAIL LOCAL CHORD LENGTH. X/CV F16. 60



VERT. TAIL CHORDWISE PRESS. DIST. ELEVON I/0=0/0. SPDBRK=0. MACH=2.50 F16. 60

2. 8. 8. 8. 2.500 RN/FT .000 ELV-08 .000 SPOSPK CHOROWISE POSITION ON VERTICAL TAIL LOCAL CHORD LENGTH, X/CV ARC97-019 IA81 LVAP(ALLHL SEALED) LEFT VERTICAL (IETV42) NACH ELV-18 RUDDER # TAG **E**00044 PRESSURE COEFFICIENT,

VERT. TAIL CHORDWISE PRESS. DIST. ELEVON 1/0=0/0, SPDBRK=0, MACH=2.50

F16. 60

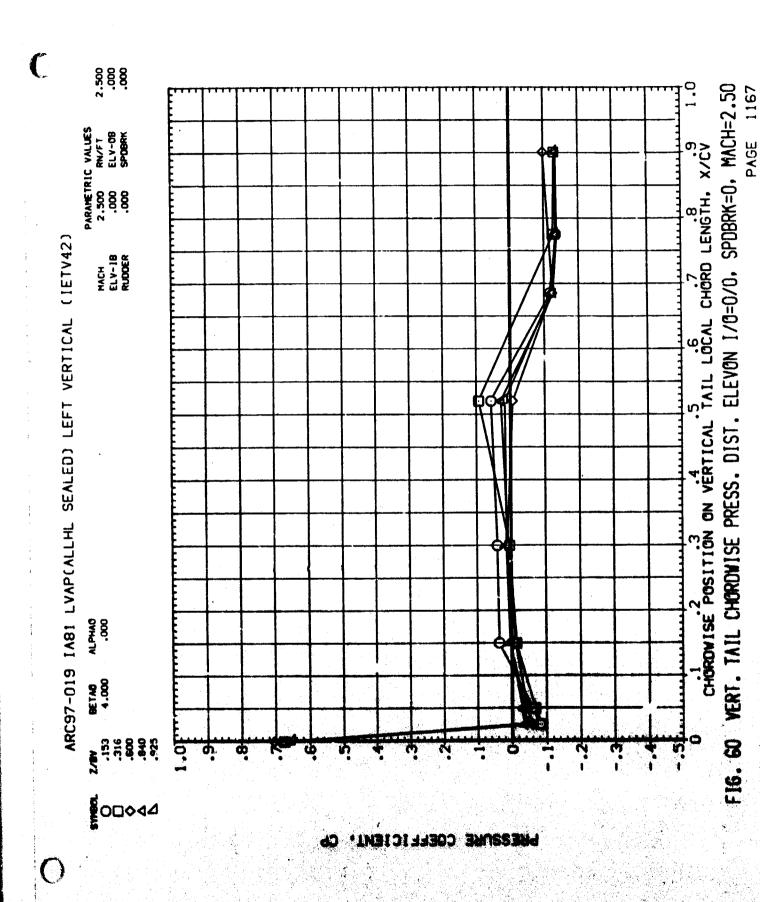
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A STATE OF STATE OF THE PROPERTY OF THE PROPER

× 8 8 8 2.500 RN/F1 .000 ELV-08 .000 SPOBRK CHORDWISE POSITION ON VERTICAL TAIL LOCAL CHORD LENGTH. X/CV ARC97-019 IABI LVAP(ALLML SEALED) LEFT VERTICAL (IETV42) HACH ELV-18 RUDDER A 746 980 ATA 600.4 00044

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FIG. 60 VERT. TAIL CHORONISE PRESS. DIST. ELEVON 1/0=0/0. SPDBRK=0. MACH=2.50



2.5 89.99.99 PARAMETRIC VALUES 2.500 RN/FT .000 ELV-08 .000 SPDBRK ARC97-019 1A81 LVAP(ALLHL SEALED) LEFT VERTICAL (IETV42) HACH ELV-18 RUDOER A P146 6.000

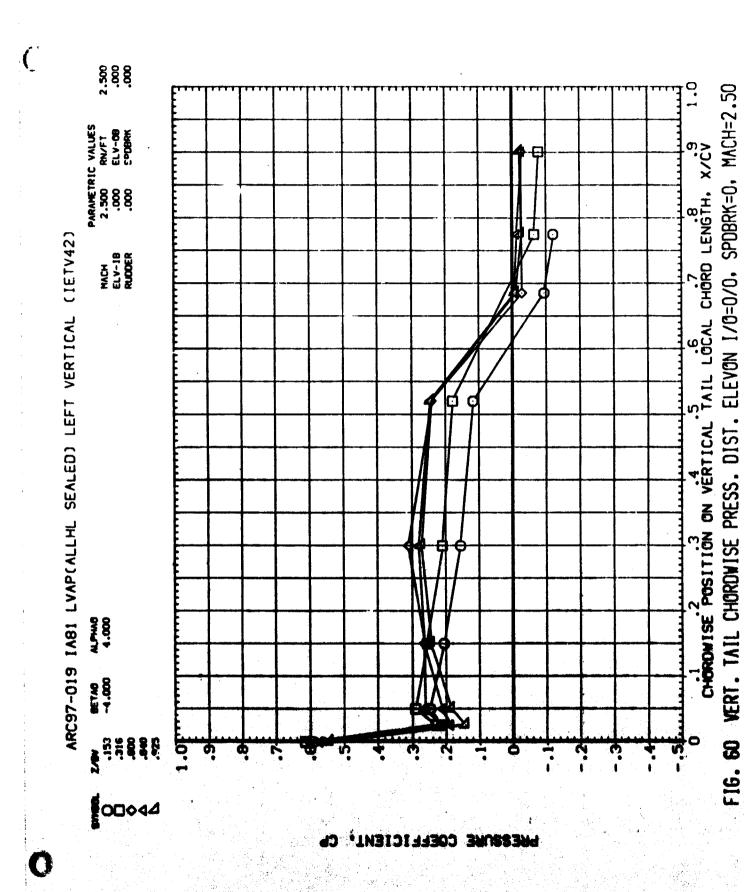
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PAGE 1168

FIG. 60 VERT. TAIL CHORDWISE PRESS. DIST. ELEVON 1/0=0/0. SPDBRK=0. MACH=2.50

CHORDWISE POSITION ON VERTICAL TAIL LOCAL CHORD LENGTH, X/CV

The second of th



2.500 FIG. 60 VERT. TAIL CHOROVISE PRESS. DIST. ELEVON I/0=0/0, SPDBRK=0, MACH=2.50 PARAMETRIC VALUES
2.500 RN/FT
.000 ELV-08
.000 SPDBRK CHORDWISE POSITION ON VERTICAL TAIL LOCAL CHORD LENGTH. X/CV 肿 ARC97-019 IA81 LYAP(ALLHL SEALED) LEFT VERTICAL (IETV42) MACH ELV-18 RUDDER A. 000 .000

2. 8. 8. 8. FIG. 60 VERT. TAIL CHORDWISE PRESS. DIST. ELEVON I/0=0/0, SPDBRK=0, MACH=2.50 2.500 RN/FT .000 ELV-08 CHORDWISE POSITION ON VERTICAL TAIL LOCAL CHORD LENGTH. X/CV ARC97-019 1A81 LVAP(ALLHL SEALED) LEFT VERTICAL (IETV42) MACH ELV-18 RUDDER 4.000

2.300. 0. PARAMETRIC VALUES 2.500 RN/FT .000 ELV-08 .000 SP08RK CHORDWISE POSITION ON VERTICAL TAIL LOCAL CHORD LENGTH. X/CV ARC97-019 IABI LVAP(ALLHL SEALED) LEFT VERTICAL (IETV42) MACH ELV-18 RUDDER A.P.M6 6.000 SATA SOC.

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PAGE 1172

VERT. TAIL CHOROWISE PRESS. DIST. ELEVON I/0=0/0, SPUBRK=0, MACH=2.50

F16. 60

3.000 55.000 PARAMETRIC VALUES
1.550 RN/F1
.000 ELV-DB CHORDWISE POSITION ON VERTICAL TAIL LOCAL CHORD LENGTH. X/CV Q ARC97-019 IA81 LVAP(ALLHL SEALED) LEFT VERTICAL (IETV33) MACH ELV-18 RUDDER 000. A. 380

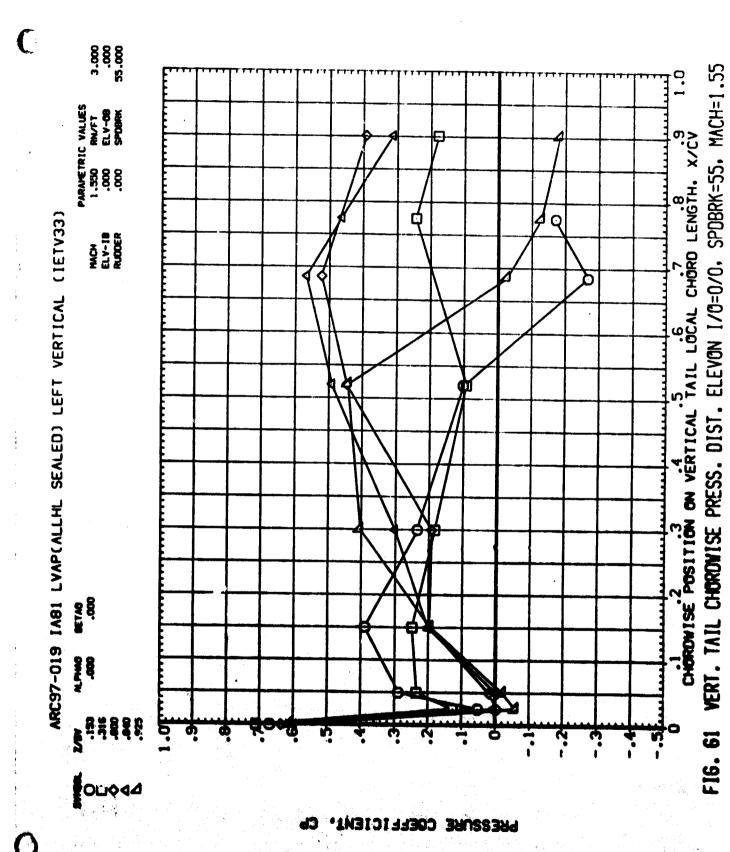
VERT. IAIL CHORDVISE PRESS. DIST. ELEVON I/0=0/0, SPDBRK=55, MACH=1.55

FIG. 61

3.00 3.00 0.00 VERT: TAIL CHORDNISE PRESS. DIST. ELEVON 1/0=0/0, SPDBRK=55, MACH=1.55 0. PARAMETRIC VALUES
1.550 RN/FT
.000 ELV-08
.000 SPOBRK CHORDWISE POSITION ON VERTICAL TAIL LOCAL CHORD LENGTH. X/CV Q ARC97-019 IA81 LVAP(ALLHL SEALED) LEFT VERTICAL (IETV33) MACH ELV-18 RUDDER 4,786 FIG. 61

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3.000 PARAMETRIC VALUES
1.550 RN/FT
.000 ELV-08
.000 SPOBRK ARC97-019 IABI LYAP(AL!HL SEALED) LEFT VERTICAL (IETV33) MACH ELV-18 RUDDER 65. 086. 2.086. 00044 PRESSURE COEFFICIENT,

VERT. TAIL CHOROWISE PRESS. DIST. ELEVON 1/0=0/0, SPDBRK=55, MACH=1.55 PAGE 1176. CHOROWISE POSITION ON VERTICAL TAIL LOCAL CHORD LENGTH, X/CV F16. 61

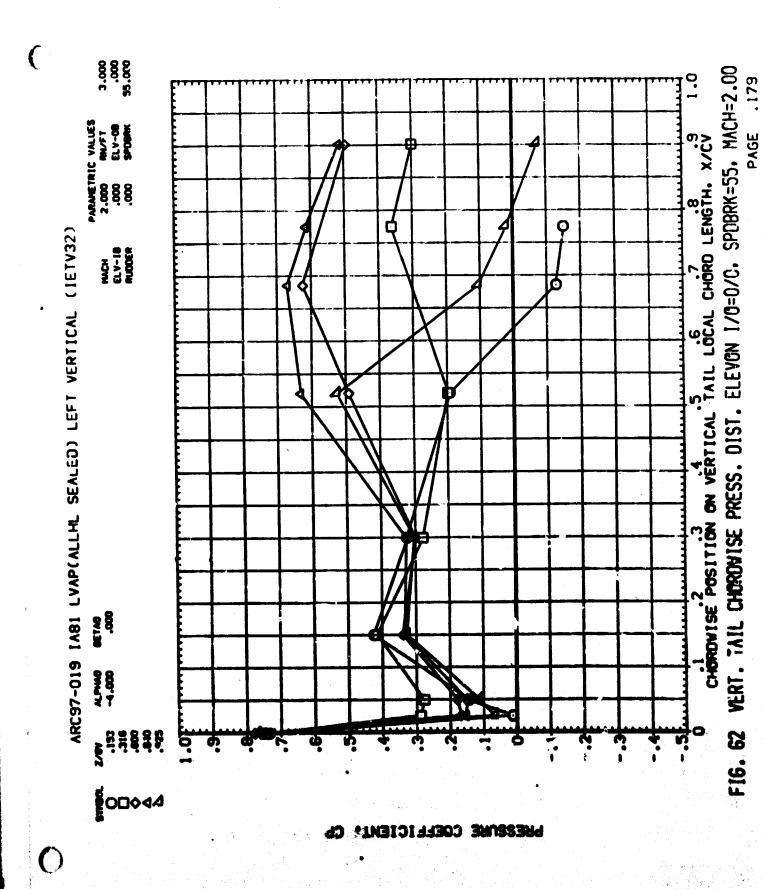
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FIG. 61 VERT. TAIL CHORDWISE PRESS. DIST. ELEVON 1/0=0/0, SPOBRK=55, MACH=1.55

60.00 000.80 000.00 CHÖRDWISE POSITION ON VERTICAL TAIL LOCAL CHORD LENGTH. X/CV 1.0 VERT. TAIL CHORDWISE PRESS. DIST. ELEVON 1/0=0/0, SPOBRK=55, MACH=2.00 PAGE 1178 2.000 RN/FT .000 ELV-08 .000 SP08RK ARC97-019 JABI LVAP(ALLHL SEALED) LEFT VERTICAL (IETV32) 9 RACH ELV-18 RUDDER A .900

F16. 62

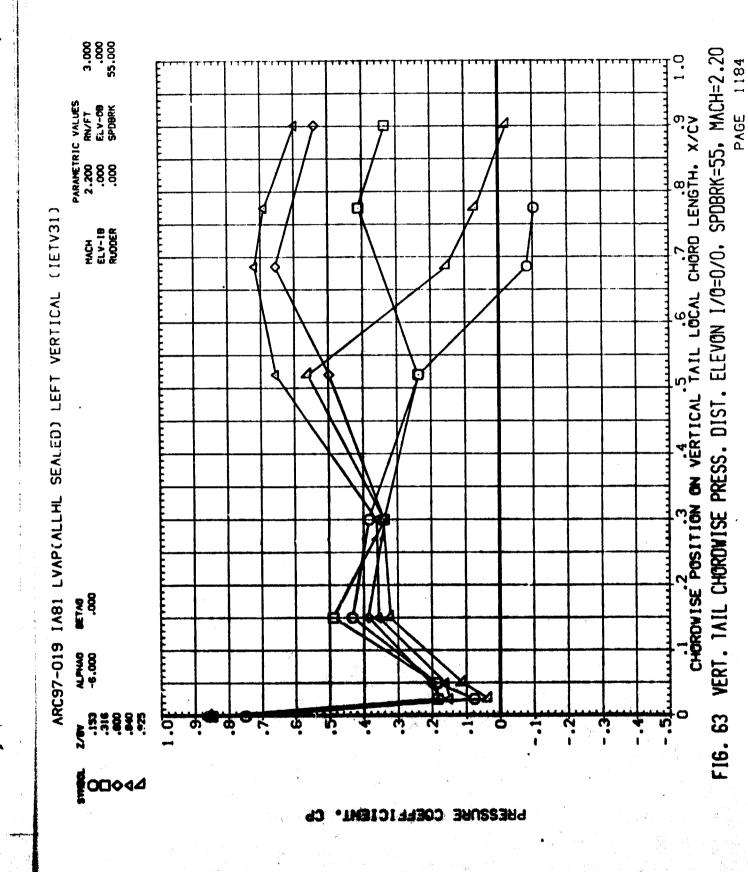


3.000 CHORDWISE POSITION ON VERTICAL TAIL LOCAL CHORD LENGTH, X/CV VERT. TAIL CHORDWISE PRESS. DIST. ELEVON 1/0=0/0, SPOBRK=55, MACH=2.00 PARAMETRIC VALUES 2.000 RN/FT .000 ELV-08 .000 SPDBRK Q (IETV32) MACH ELV-18 RUDDER ARC97-019 IA81 LVAP(ALLHL SEALED) LEFT VERTICAL 9ETAG .00C ALPHAB. FIG. 62 B **E**O□◊44 PRESSURE COEFFICIENT,

3.000 VERT. TAIL CHORDWISE PRESS. DIST. ELEVON 1/0=0/0, SPDBRK=55, MACH=2.00 PARAMETRIC VALUES 2.000 RN/F1 .000 ELV-08 CHORDWISE POSITION ON VERTICAL TAIL LOCAL CHORD LENGTH. X/CV Q ARC97-019 IA81 LVAP(ALLHL SEALED) LEFT VERTICAL (IETV32) MACH ELV-18 RUDDER 86.1A6 .000 ALPHAG 8.000

F16. 62

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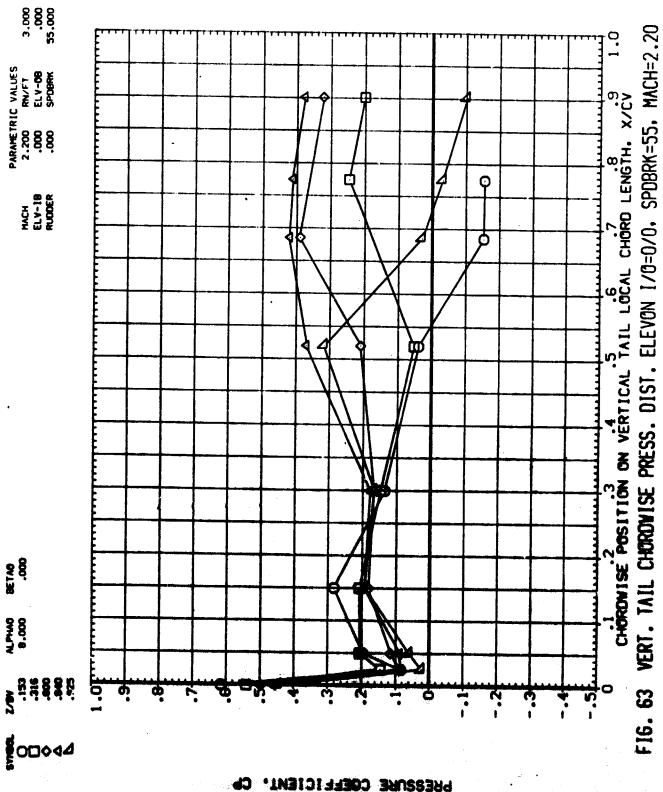


3.000 .000 55.000 VERT. TAIL CHORDWISE PRESS. DIST. ELEVON I/0=0/0, SPOBRK=55, MACH=2.20 PAGE 1186 2.200 RN/FT .000 ELV-08 .000 SP08RK CHORDWISE POSITION ON VERTICAL TAIL LOCAL CHORD LENGTH. X/CV Q ARC97-019 IA81 LVAP(ALLHL SEALED) LEFT VERTICAL (IETV31) MACH ELV-18 RUDDER .000 ALPHAG. F16. 63 η 4. 00044 COELLICIEMI.

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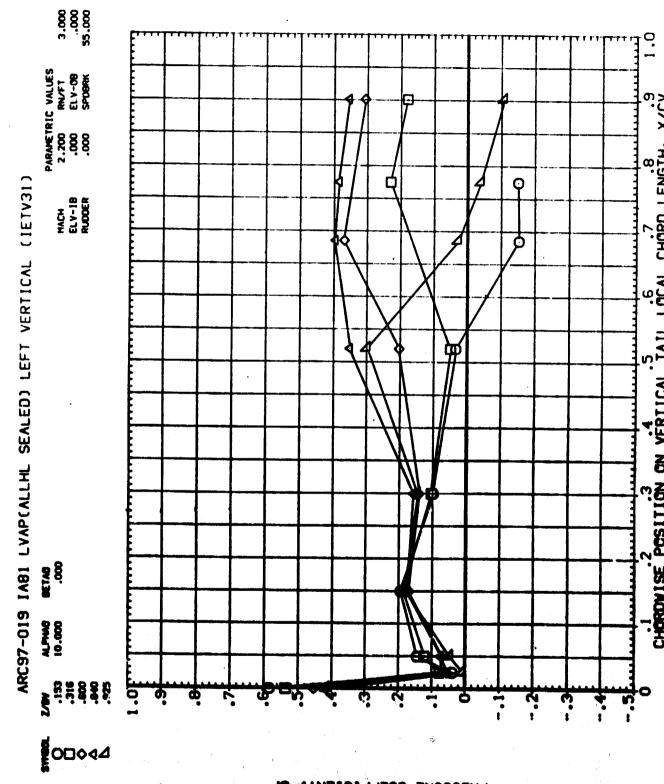
3.000 55.000 FIG. 63 VERT. TAIL CHORDWISE PRESS. DIST. ELEVON I/0=0/0, SPOBRK=55, MACH=2.20 PARAMETRIC VALUES
2.200 RN/FT
.000 ELV-08
.000 SPDBRK CHORDWISE POSITION ON VERTICAL TAIL LOCAL CHORD LENGTH. X/CV ARC97-019 IA81 LVAP(ALLHL SEALED) LEFT VERTICAL (IETV31) Q MACH ELV-18 RUDDER **BETAG** ALPHA6 4.000 **€**0□044 PRESSURE COEFFICIENT

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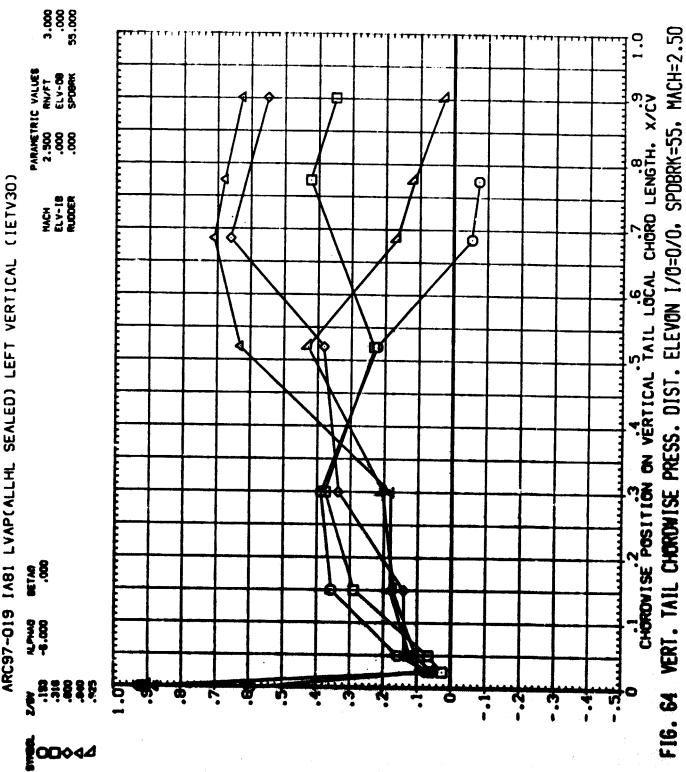
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CHORDWISE POSITION ON VERTICAL TAIL LOCAL CHORD LENGTH, X/CV FIG. 63 VERT. TAIL CHORDWISE PRESS. DIST. ELEVON I/0=0/0, SPDBRK=55, MACH=2.20





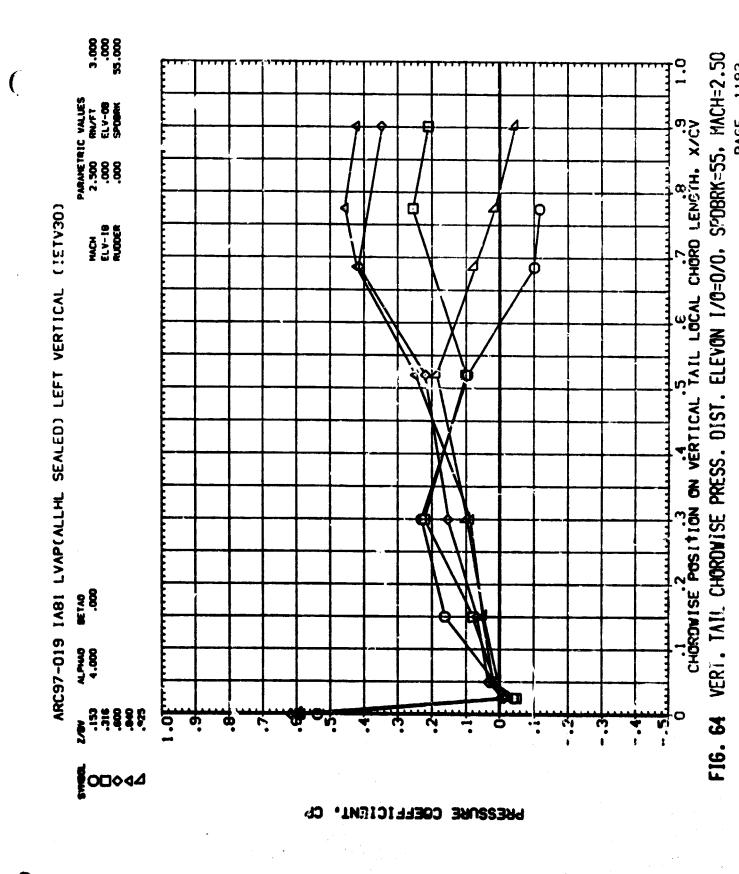
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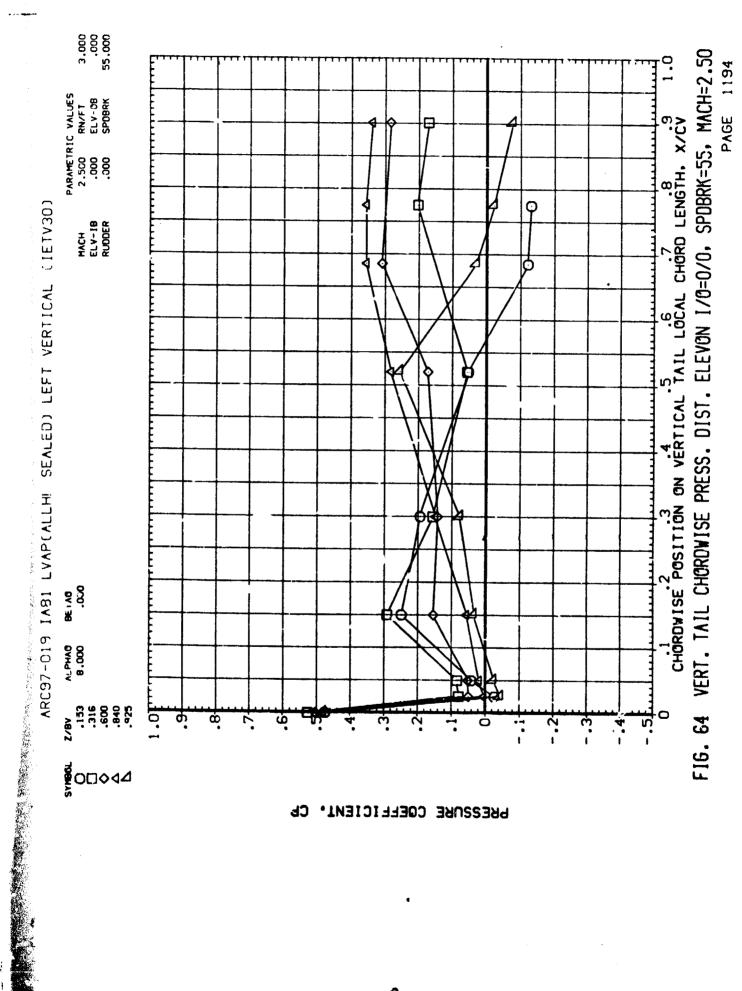
PRESSURE COEFFICIENT,

VERT. TAIL CHOROWISE PRESS. DIST. ELEVON 1/0=0/0. SPDBRK=55. MACH=2.50

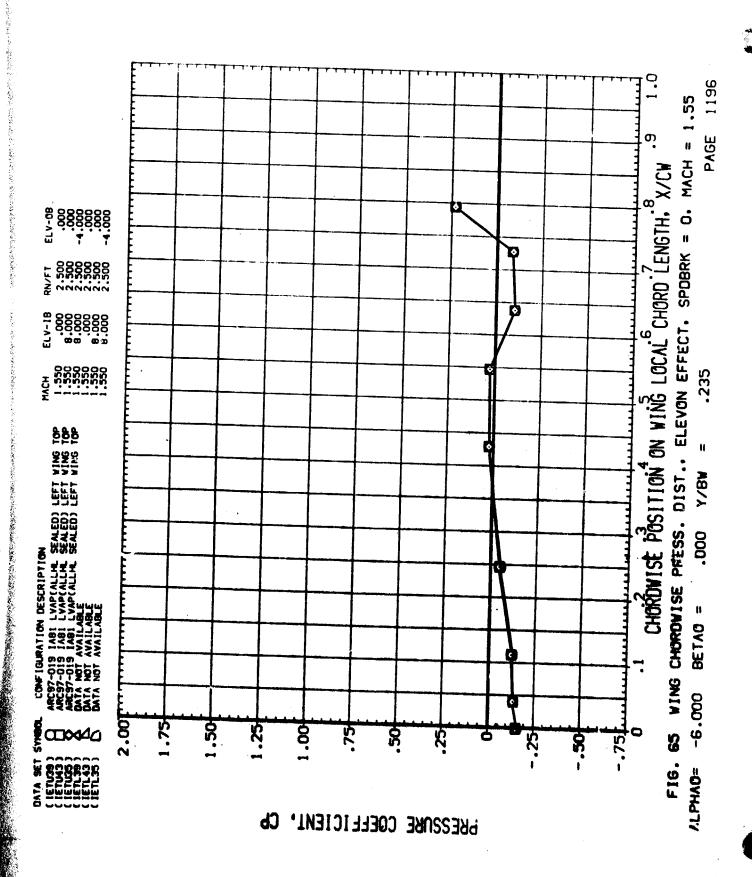
F16. 64

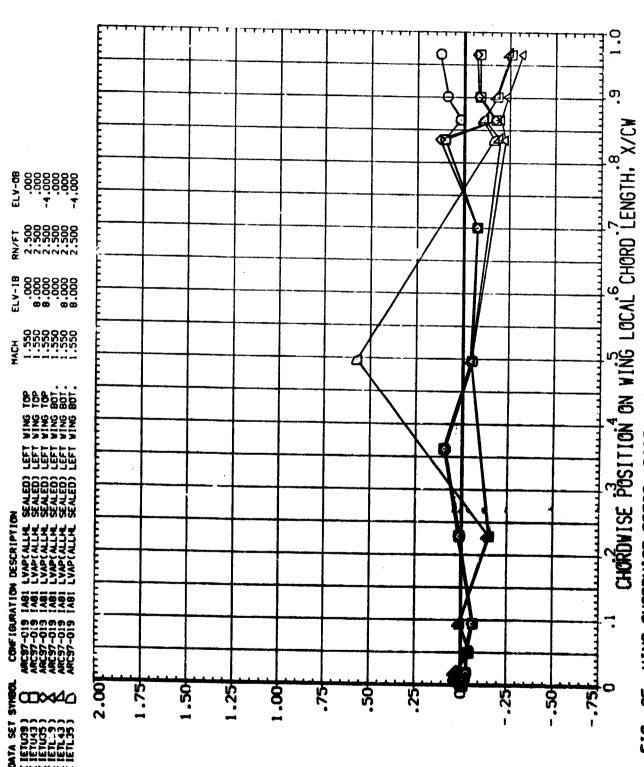
85.00 00.00 00.00 VERT. TAIL CHORDWISE PRESS. DIST. ELEVON 1/0=0/0. SPOBRK=55. MACH=2.50 PAGE 1192 PARAMETRIC VALUES 2.500 RAFT .000 ELV-08 .000 SPOBRK CHORDWISE PUSITION ON VERTICAL TAIL LOCAL CHORD LENGTH. X/CV ARC97-019 IA81 LVAP(ALLH SEALED) LEFT VERTICAL (TETV30) MACH ELV-18 RUDDER 87.86 80. 4 8 8 9 داو. ه PRESSURE COEFFICIENT.





PRESSURE COEFFICIENT.

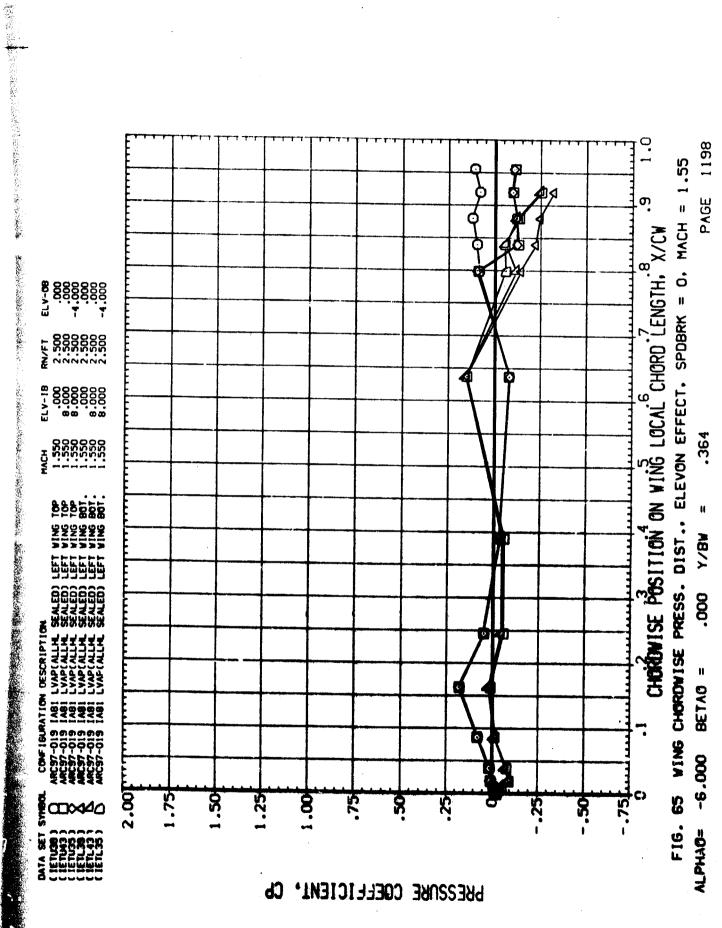




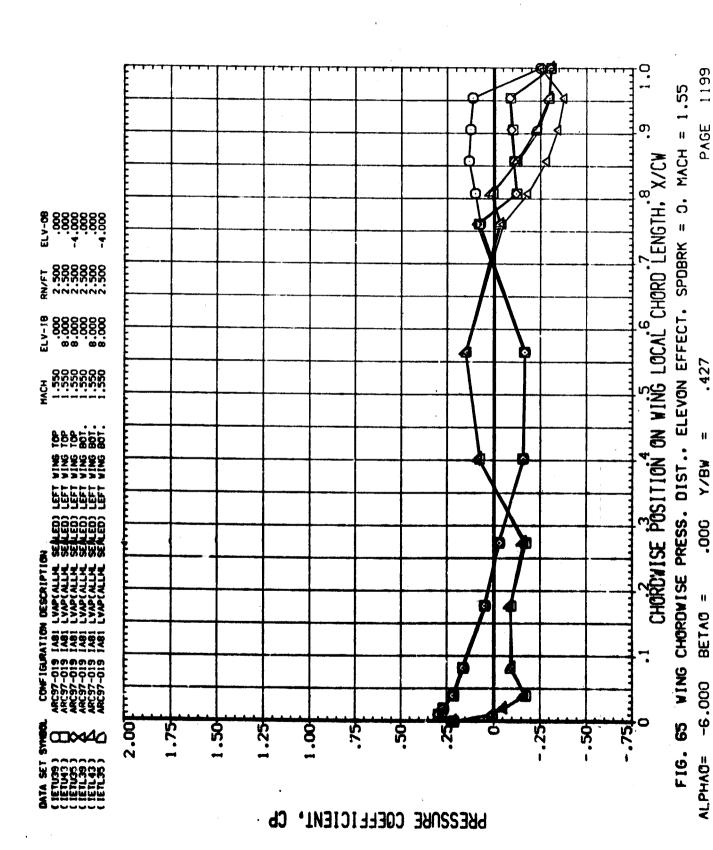
PRESSURE COEFFICIENT,

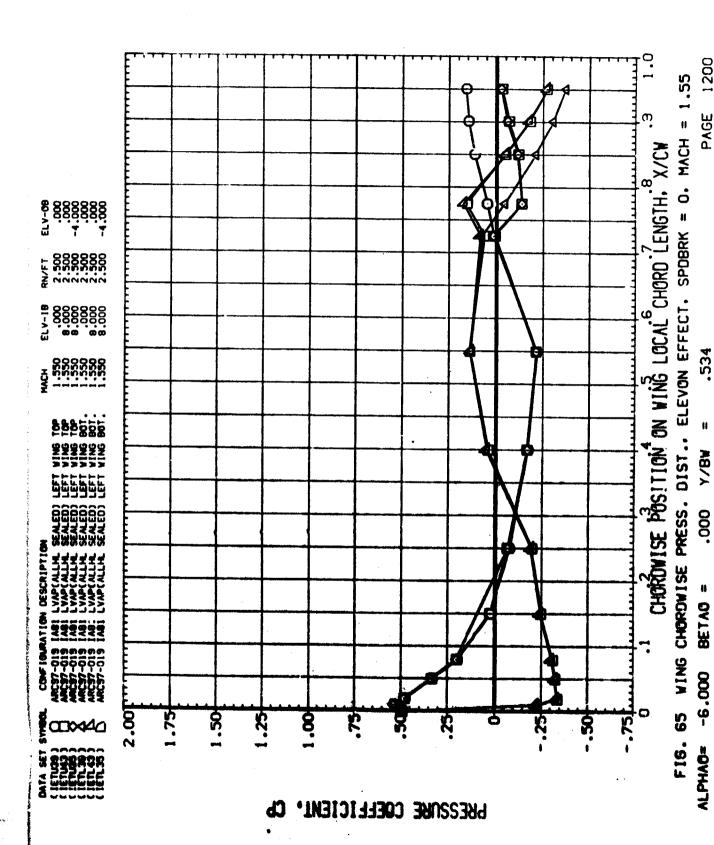
FIG. 65 WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPDBRK = 0, MACH = 1.55 Y/8W 000. BETAO = -6.000 ALPHAG=

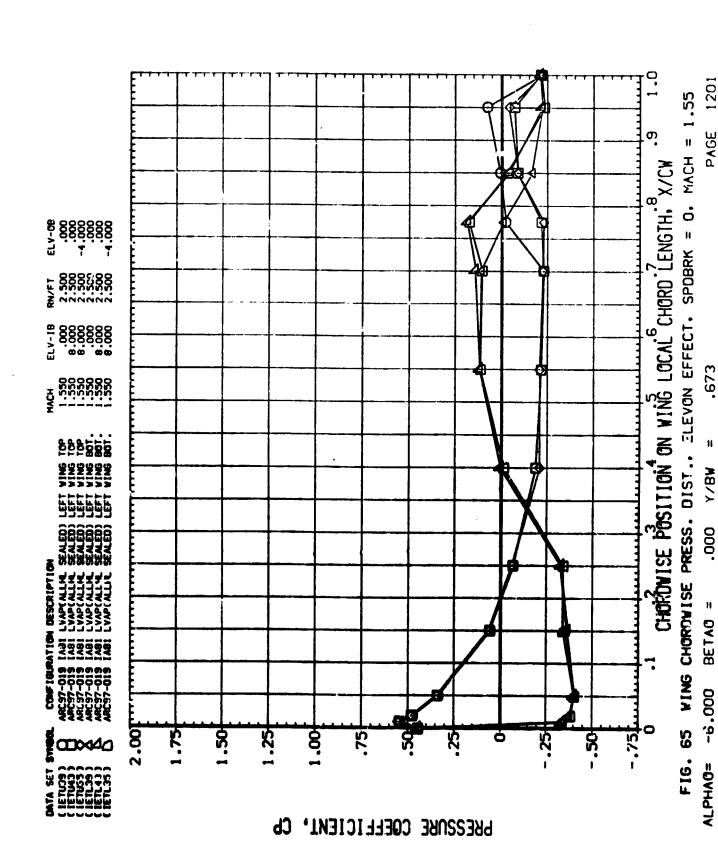
PAGE 1197

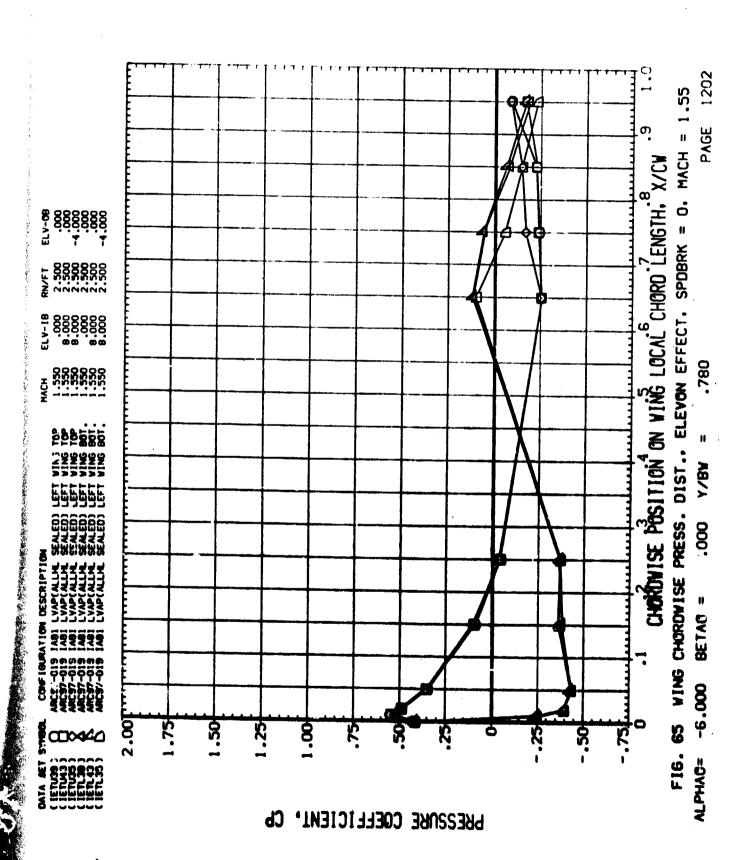


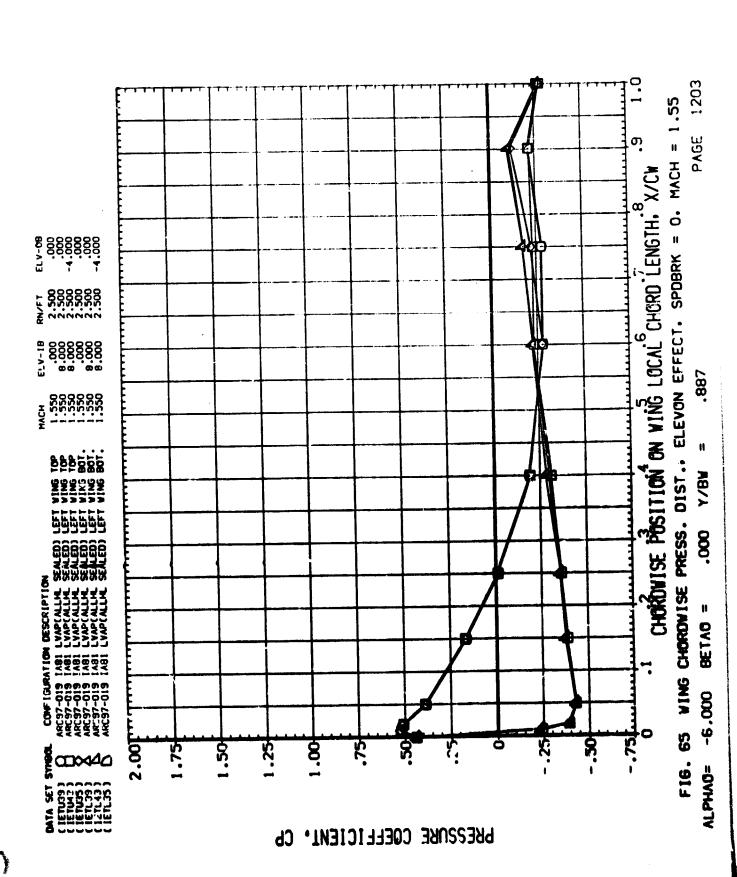
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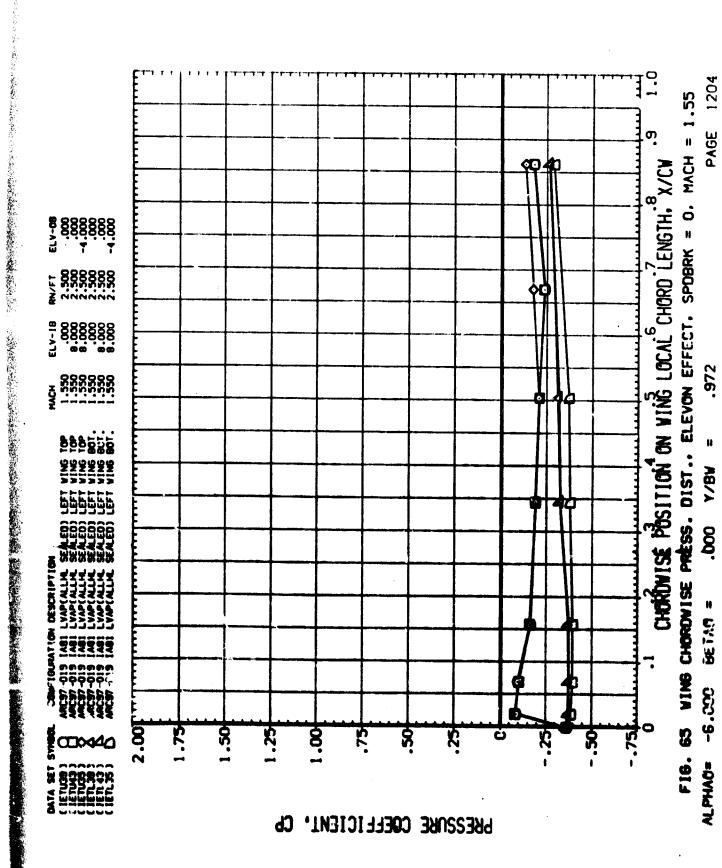




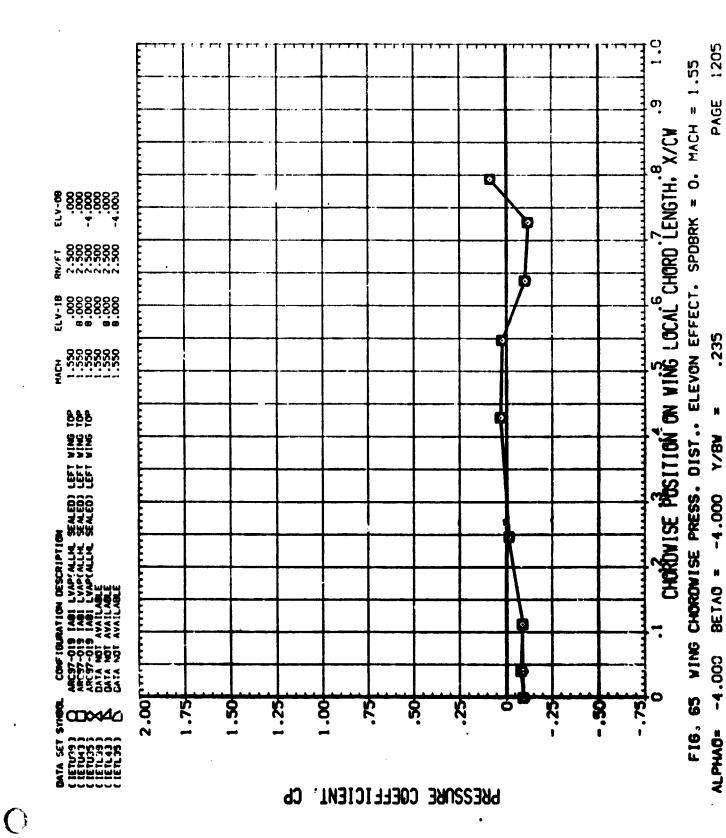


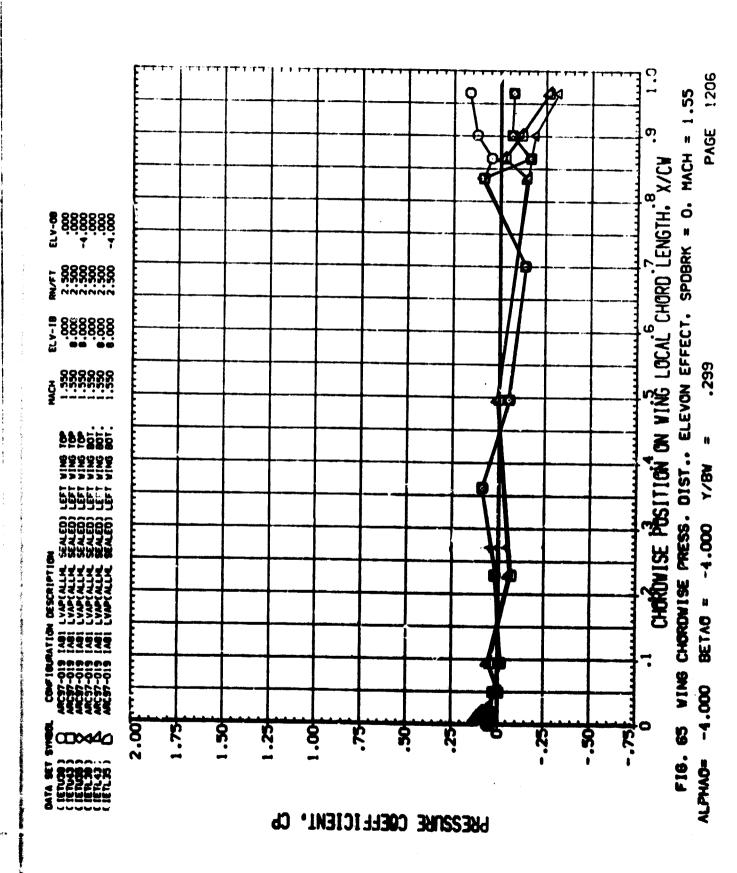


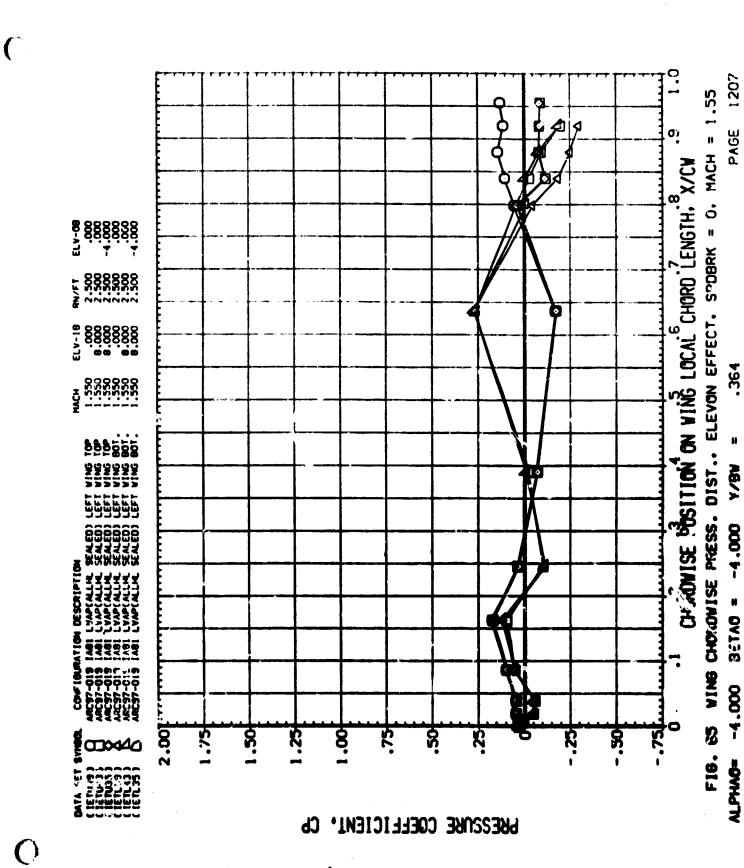
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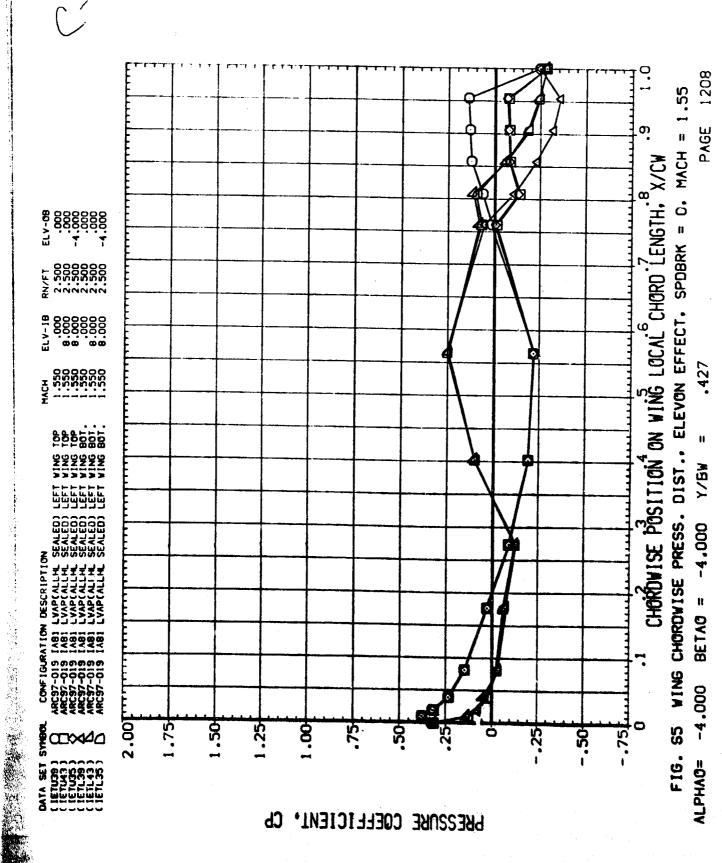


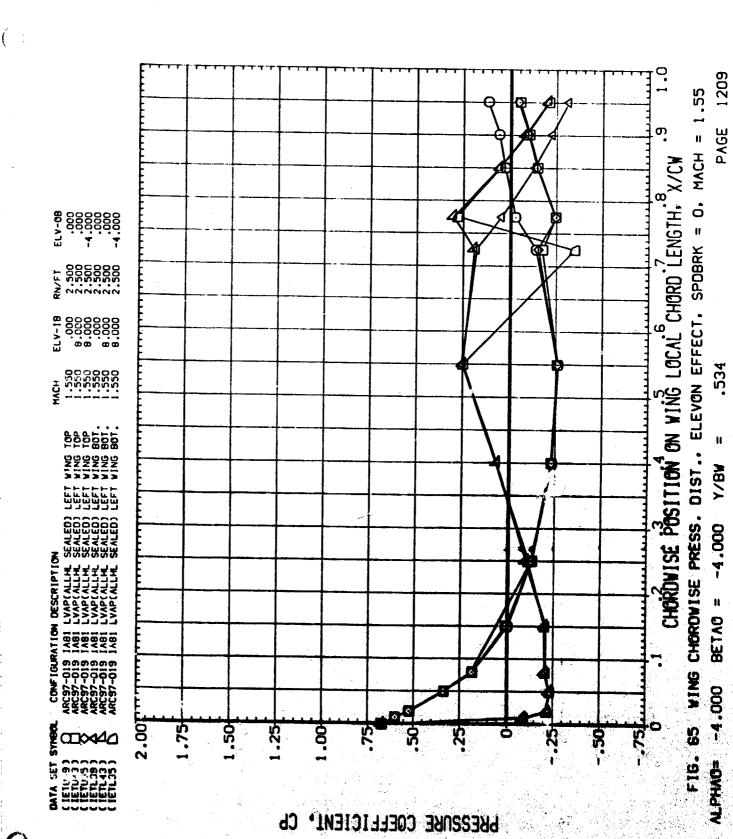
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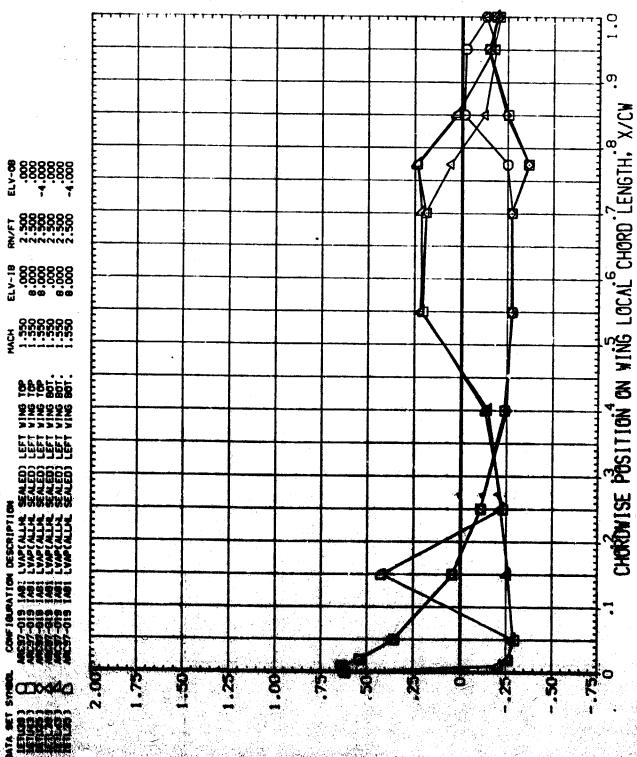












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1210 FIG. 65 WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPDBRK = 0. MACH = 1.55 PAGE Y/BW -4.000 BETAG = ALPHAD= -4.000

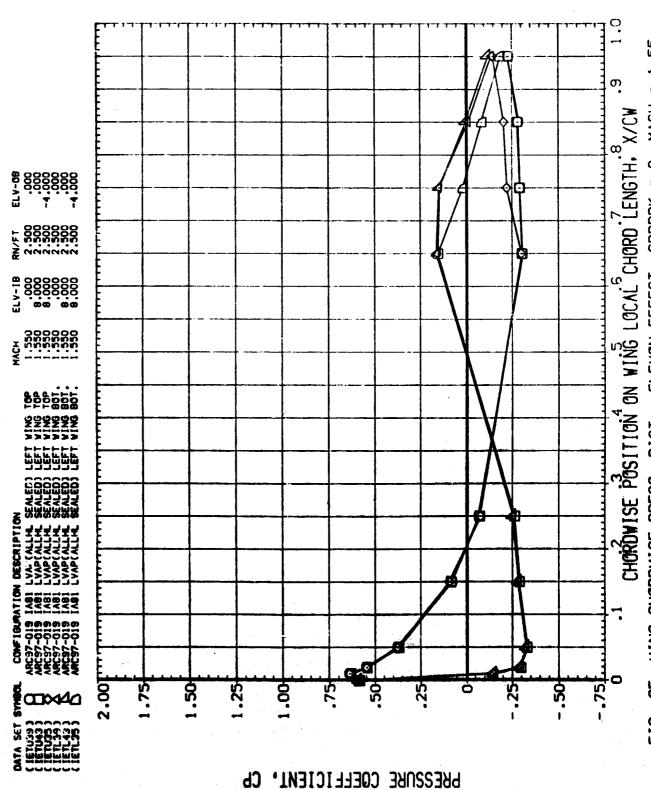
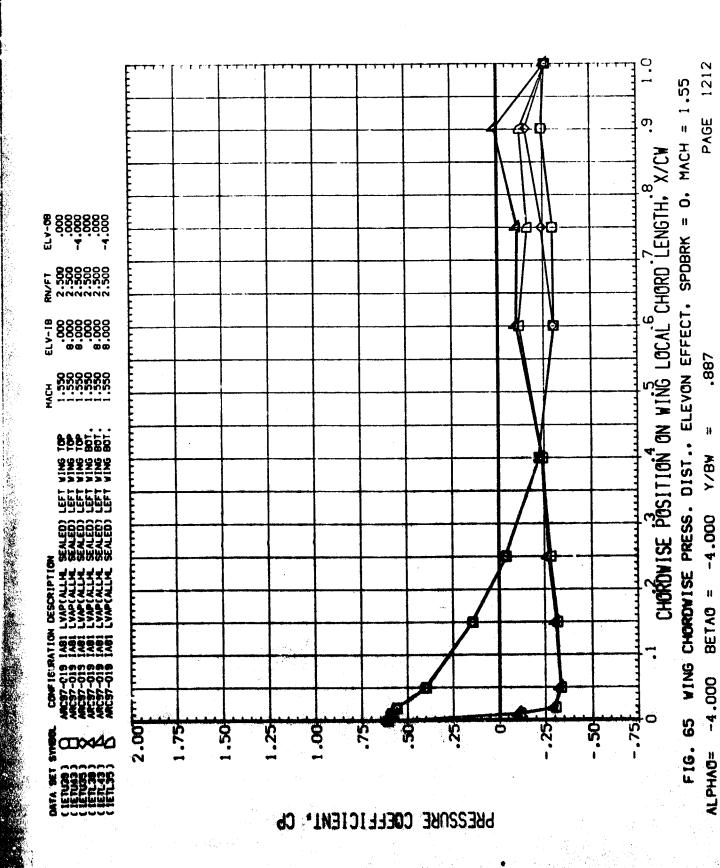
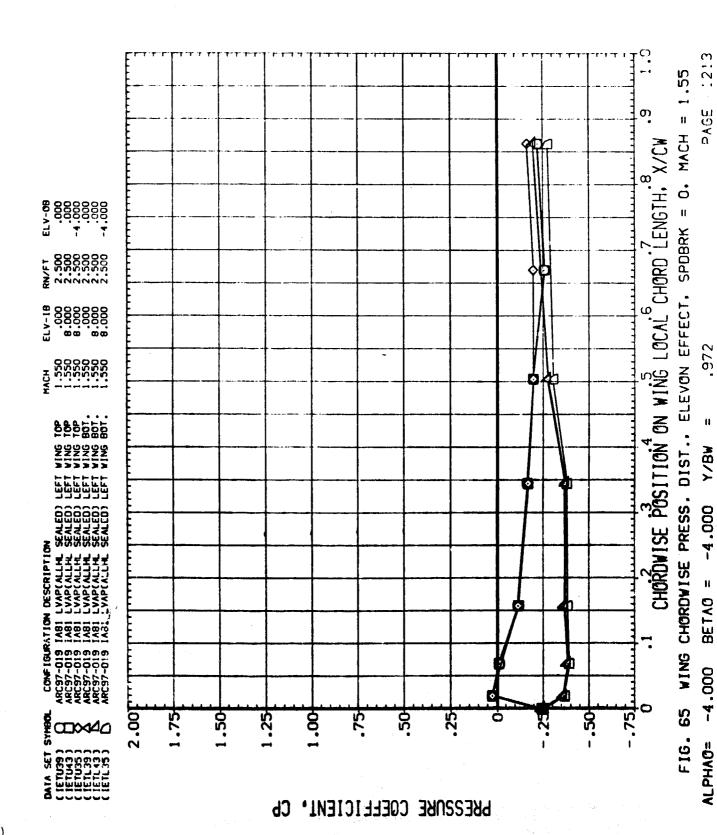
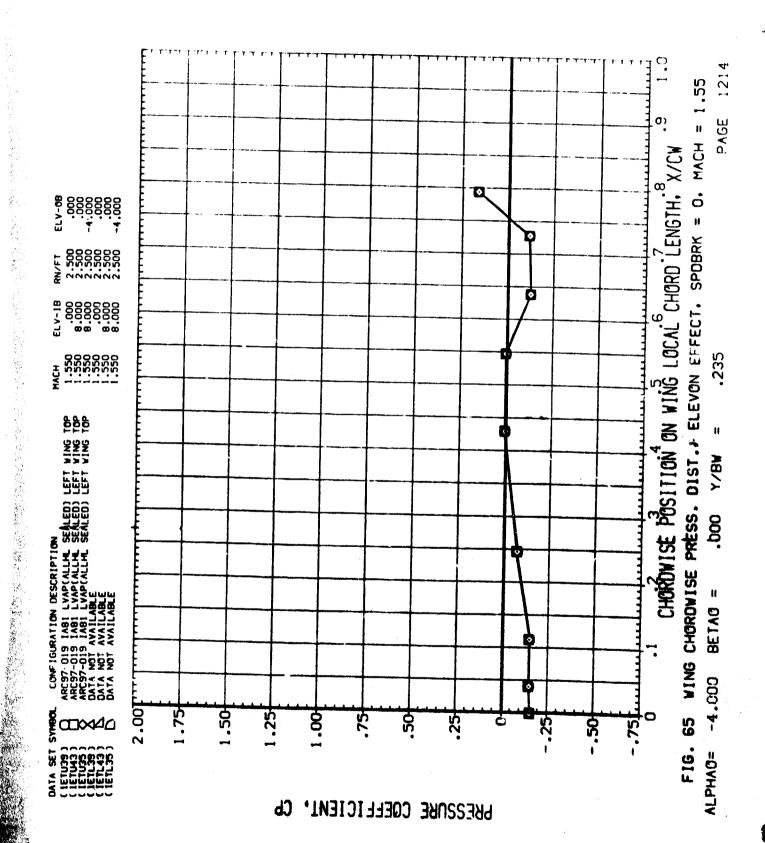


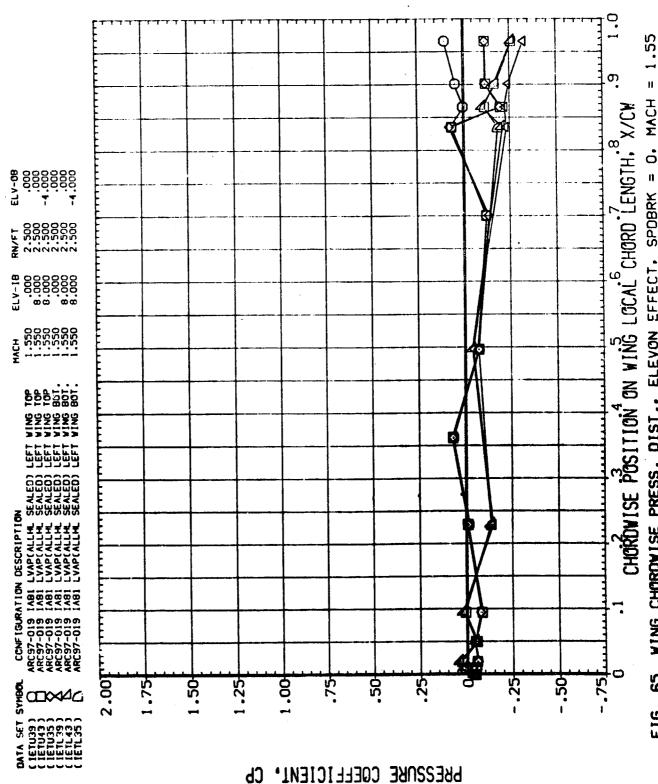
FIG. 65 WING CHORDWISE PRESS. DIST., ELEVON EFFECT, SPOBRK = 0, MACH = 1.55 Y/BW -4.000 BETAO = -4.000 ALPHA0=

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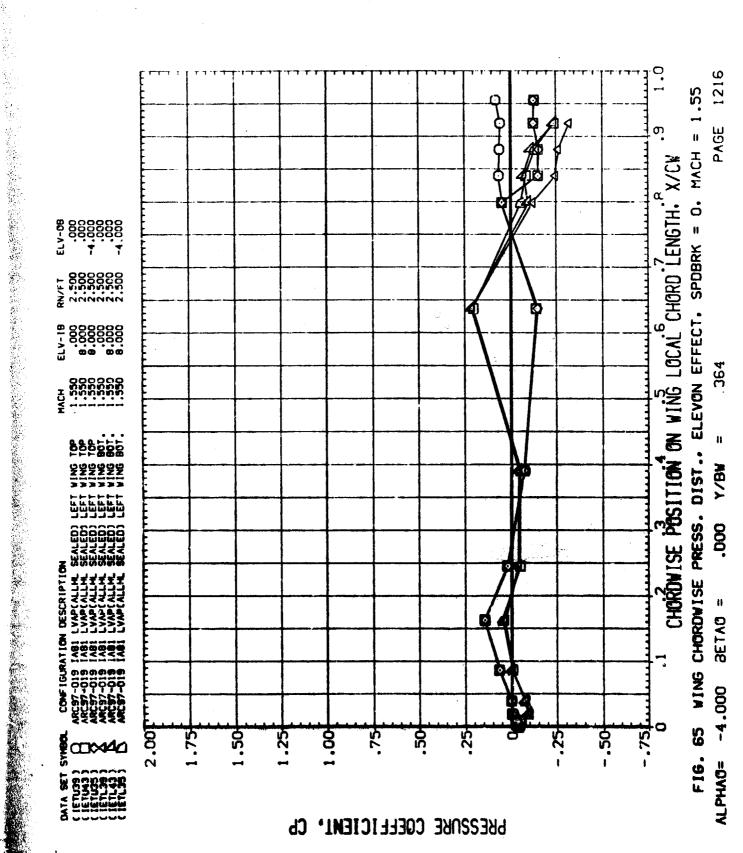


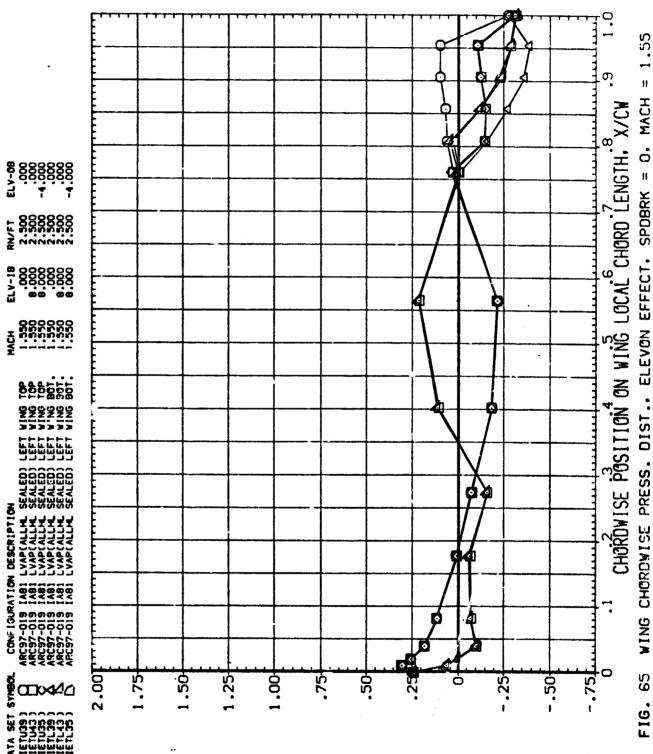






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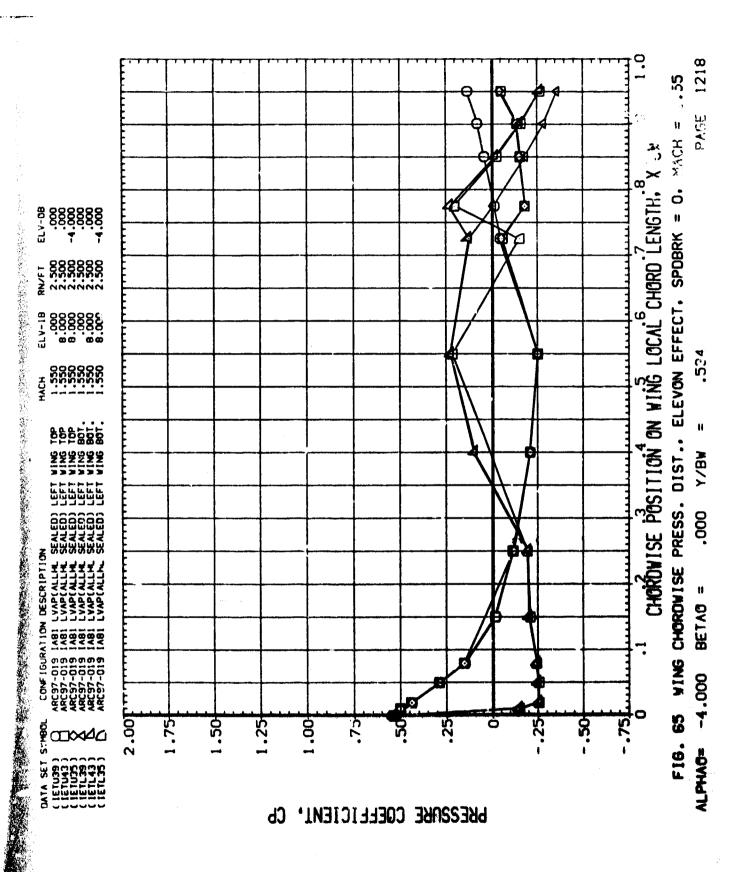
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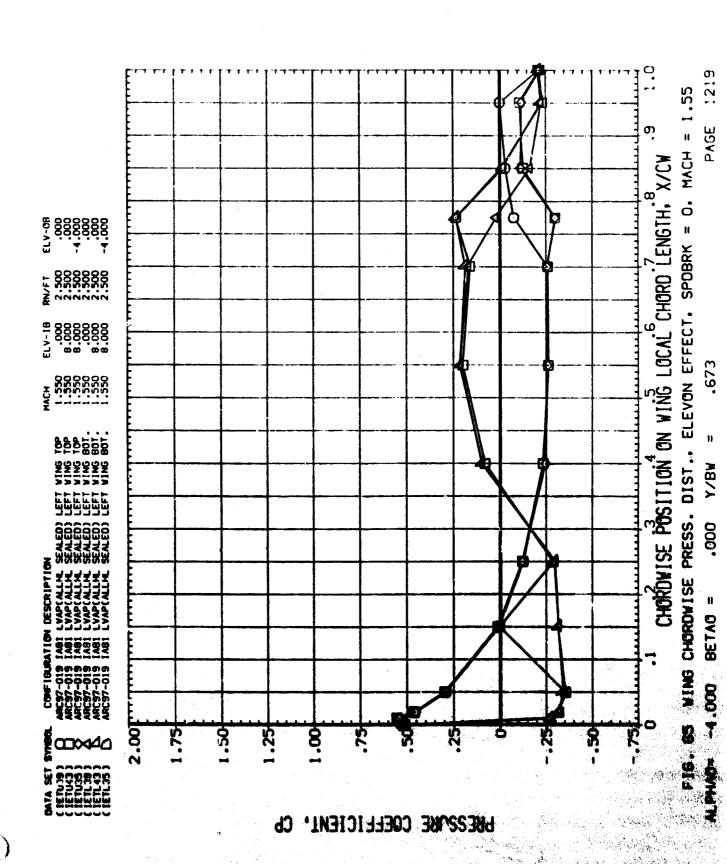
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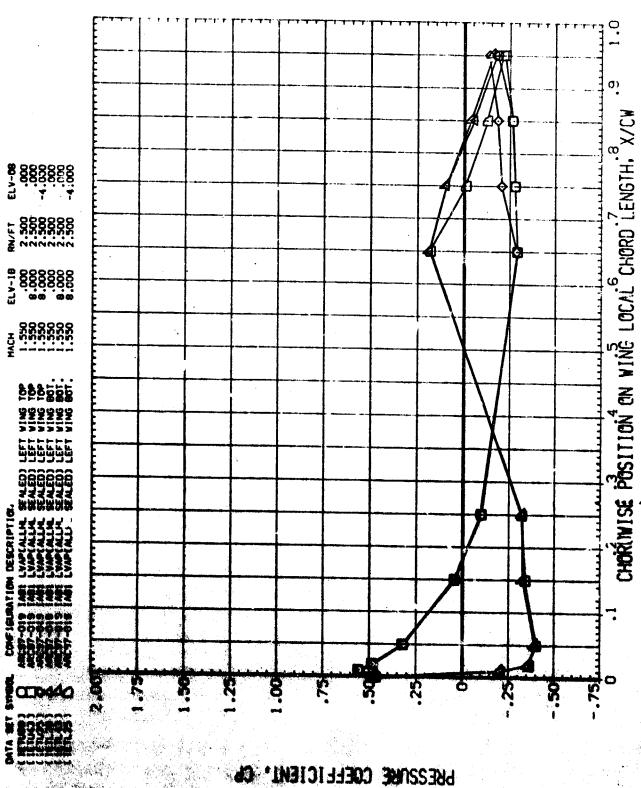
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PRESSURE COEFFICIENT, CP





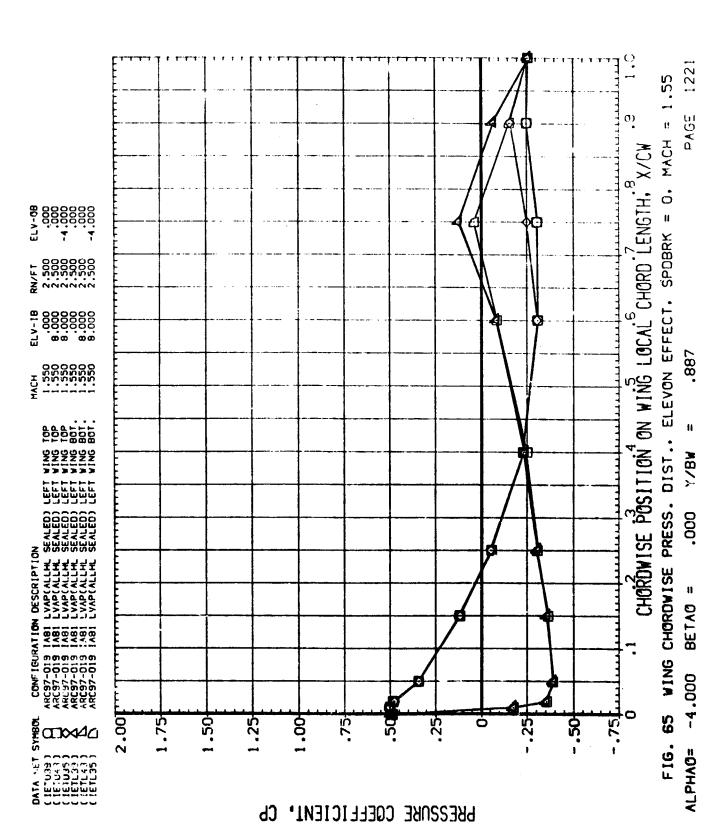
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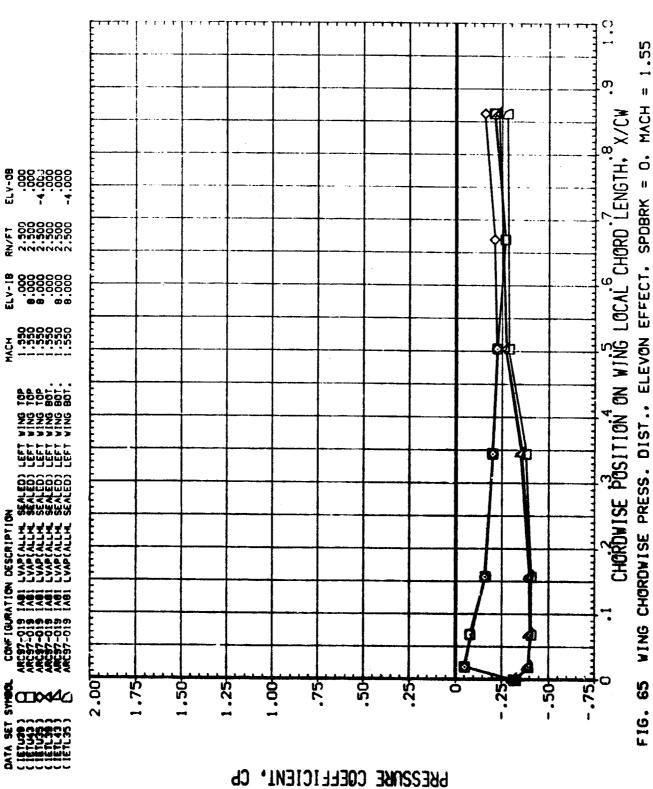
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FIG. 65 WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPUBRK = 0. MACH = 1.55 .780 **7/8W** BETAG = -4.000 ALPHAG=

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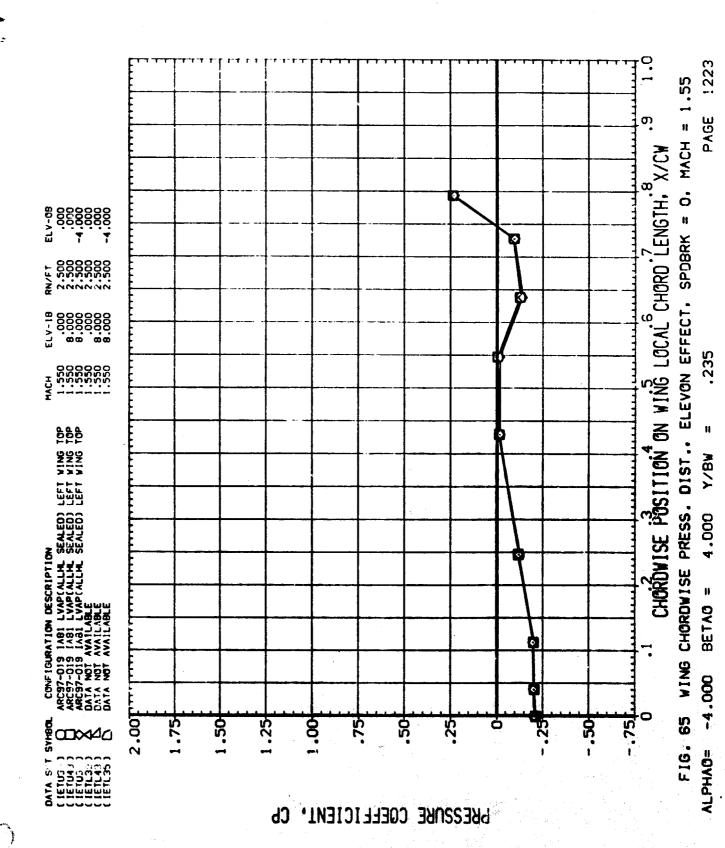
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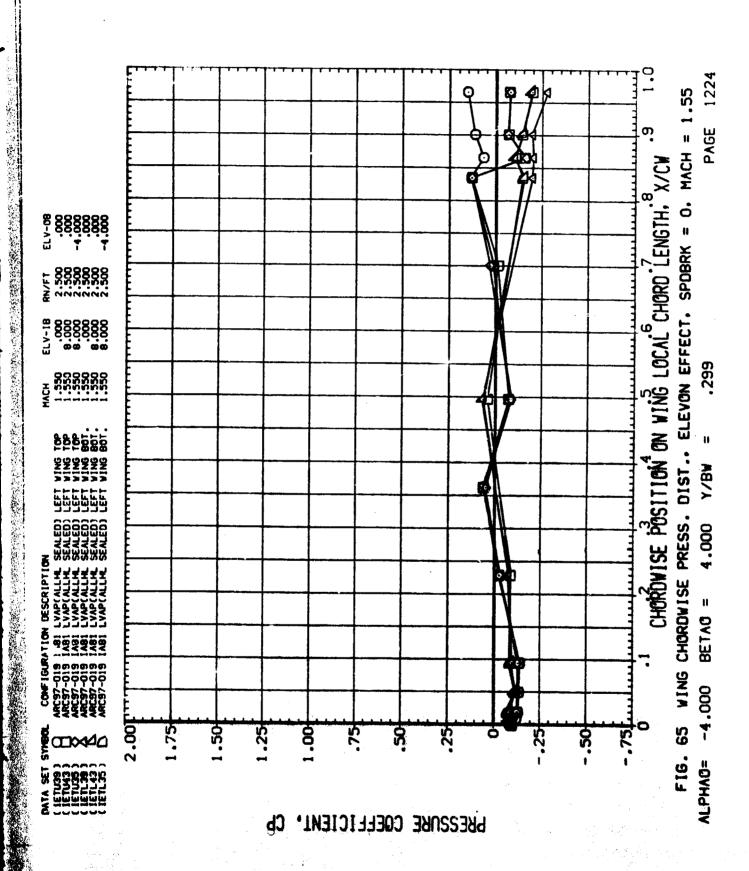


Y/BW 89 H BETAO -4.000 F16. 65 ALPHAG=

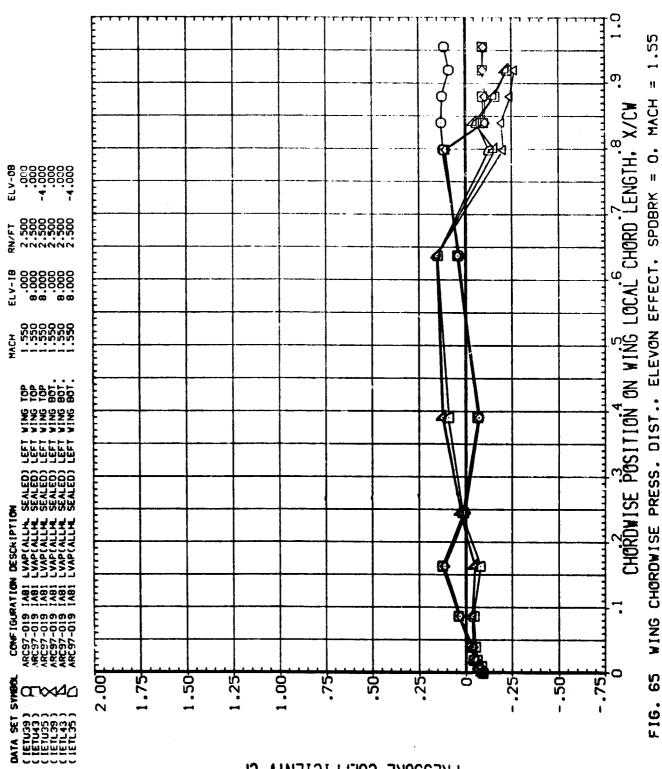
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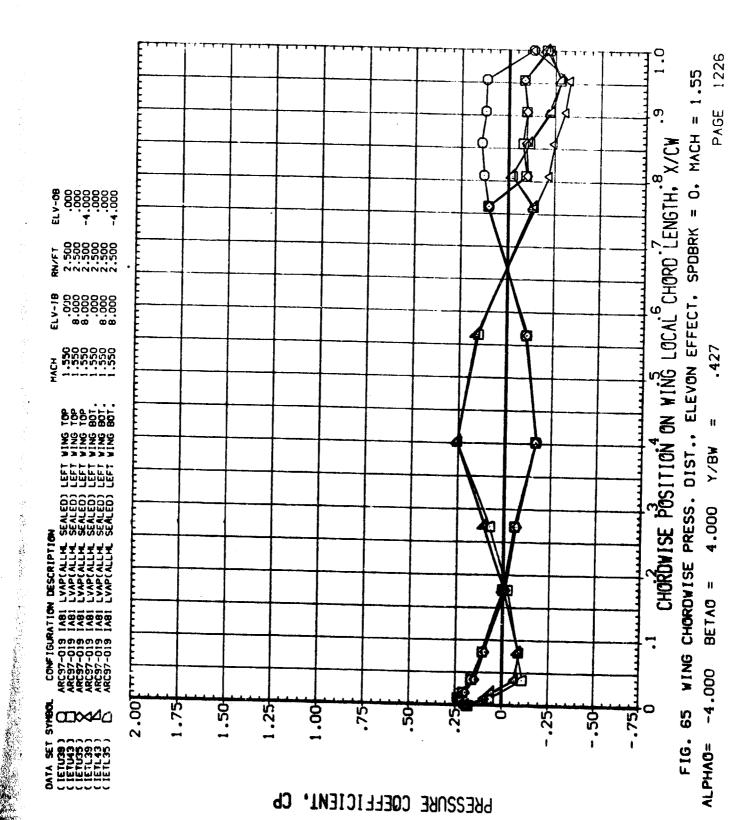
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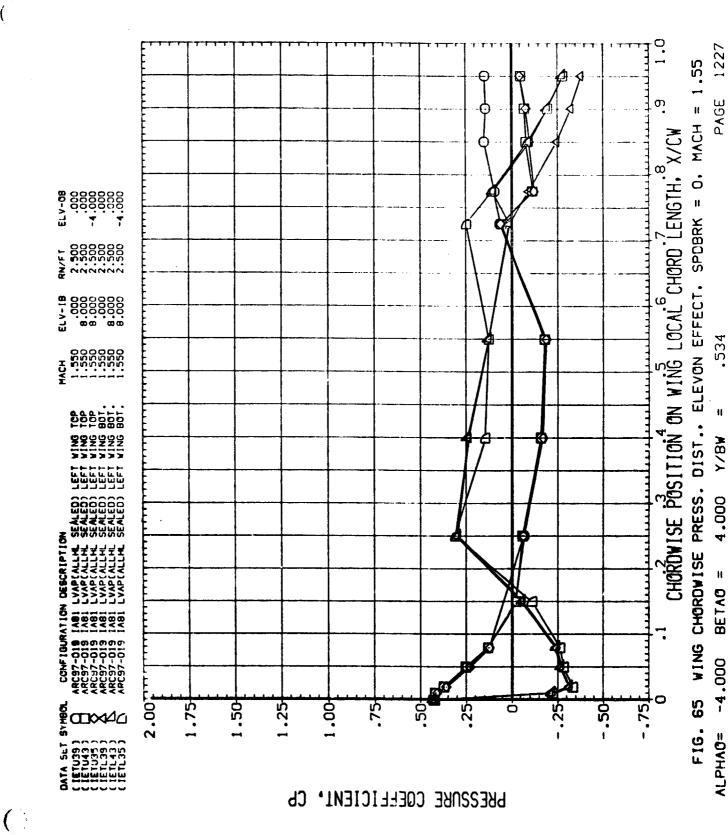
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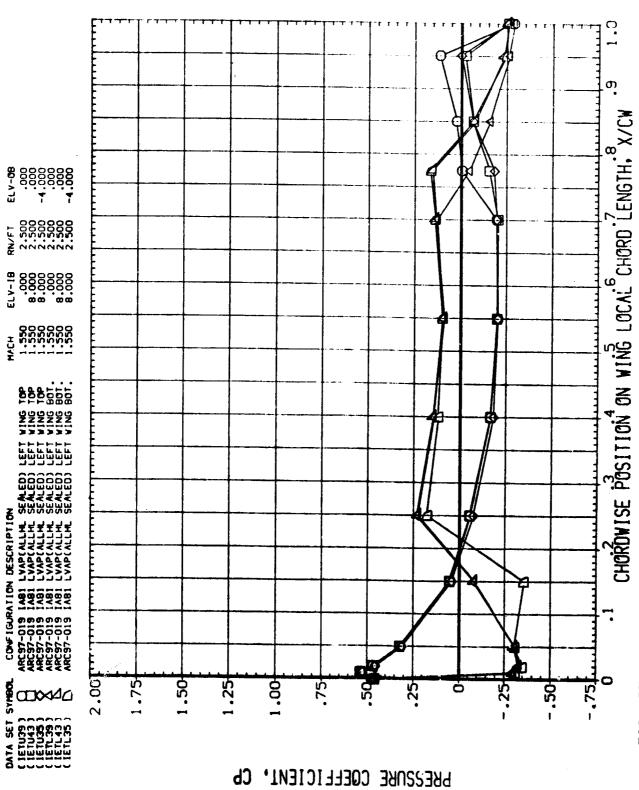
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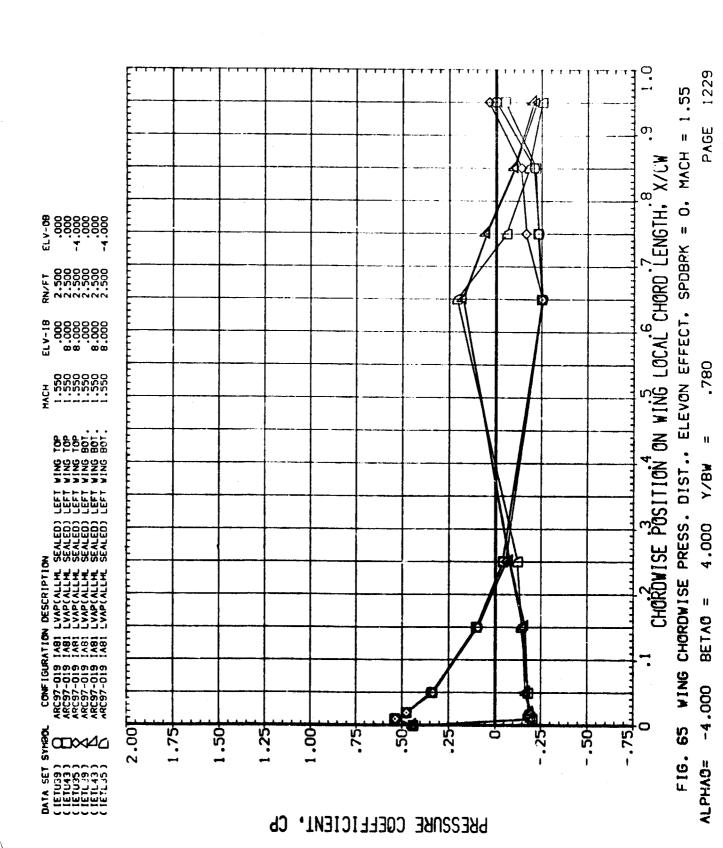
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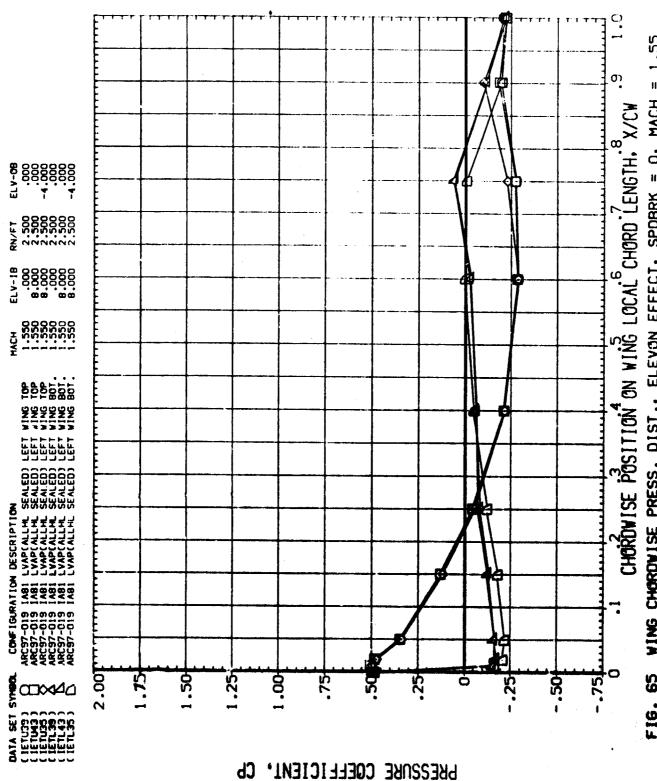






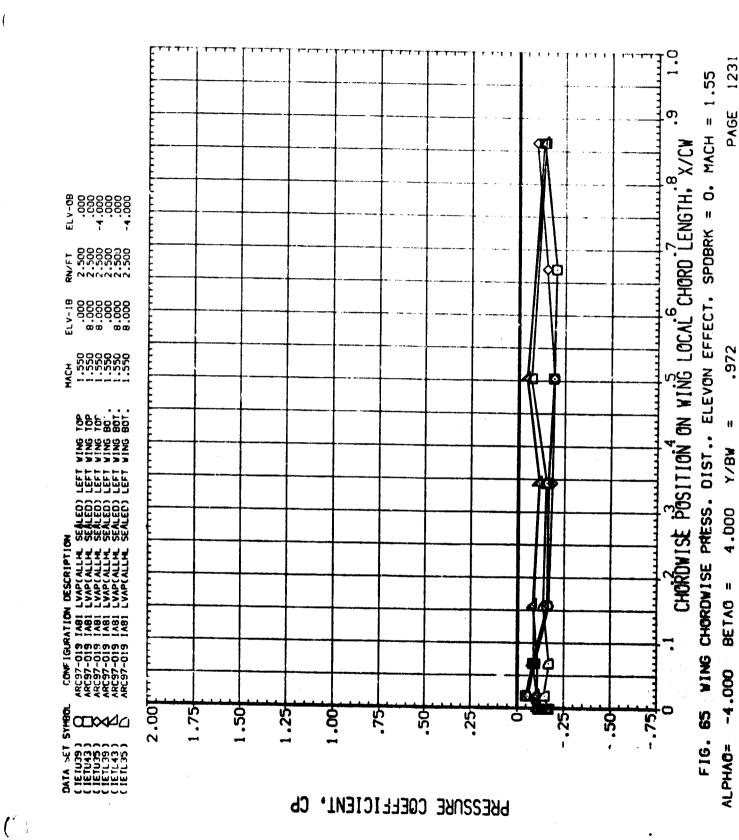
1228 MACH = 1.55PAGE WING CHORDWISE PRESS. DIST., ELEVON EFFECT, SPOBRK = 0. Y/BW 4.000 BETAO = -4.000 FIG. 65 ALPHAG=

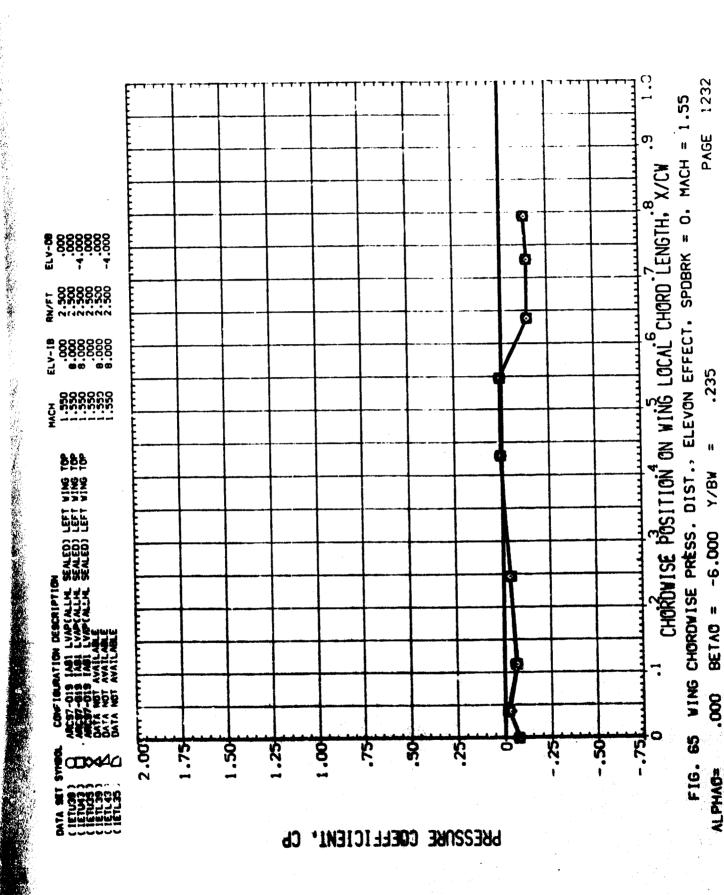


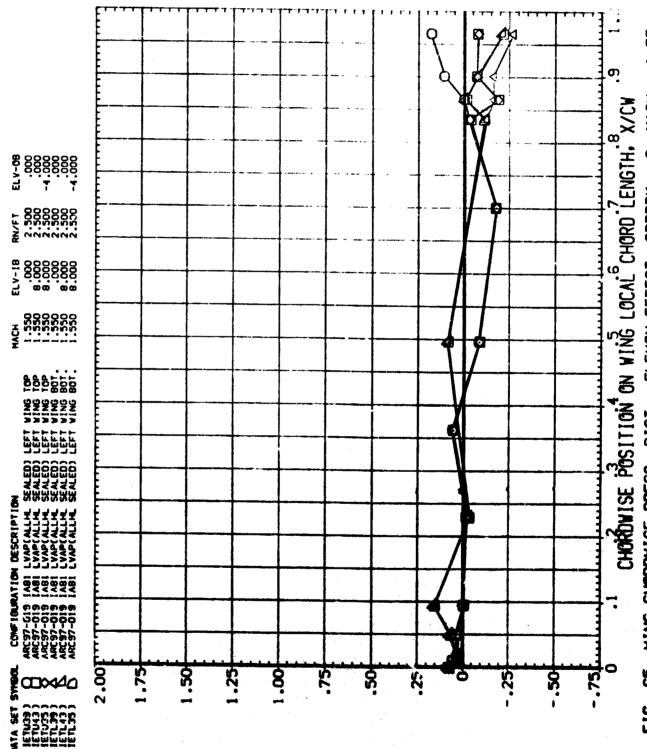


WING CHORDWISE PRESS. DIST., ELEVON EFFECT, SPOBRK = 0, MACH = 1.55 4.000 BETAO = -4.000 FIG. 65 AL PHAG=

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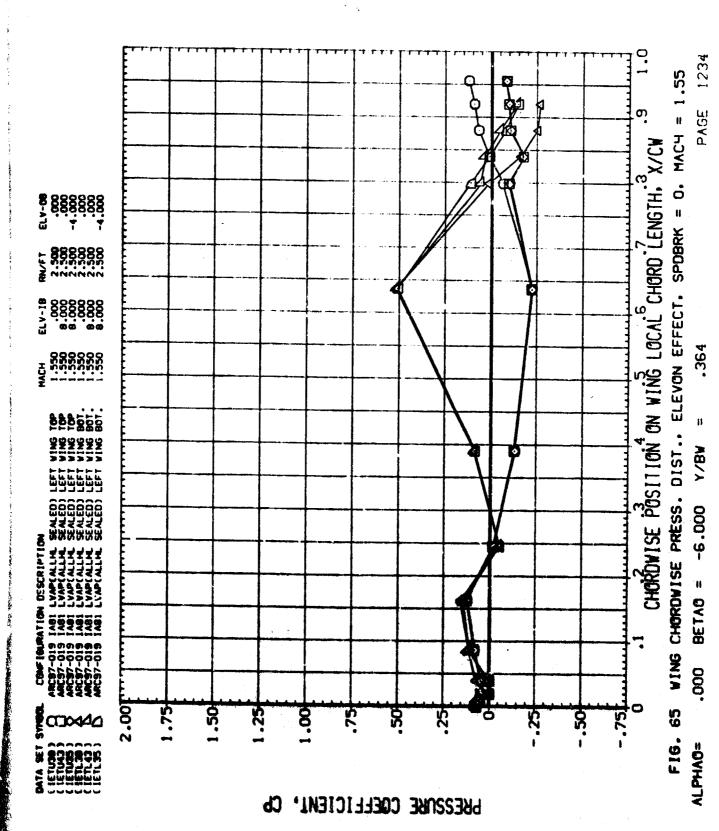


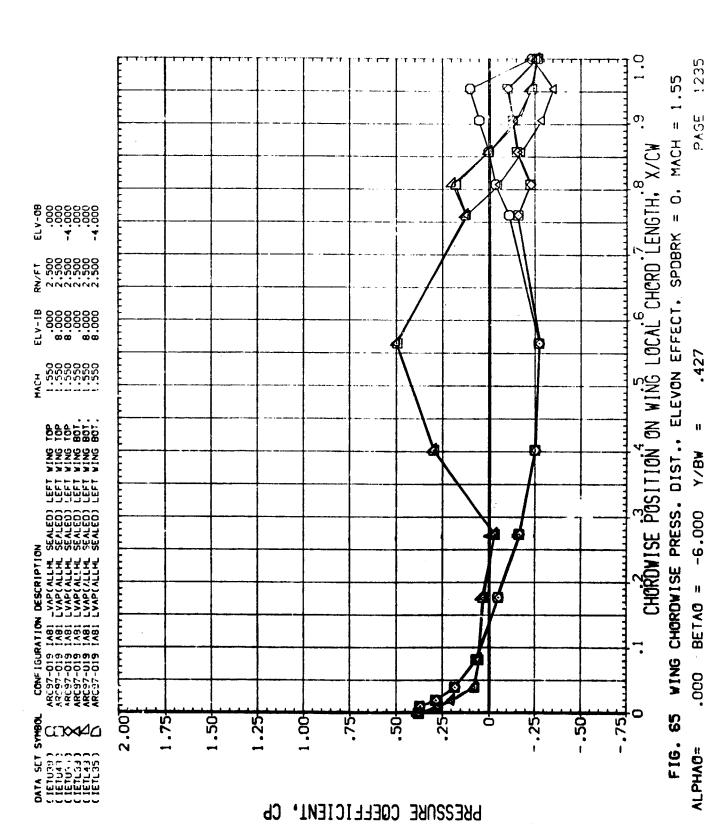


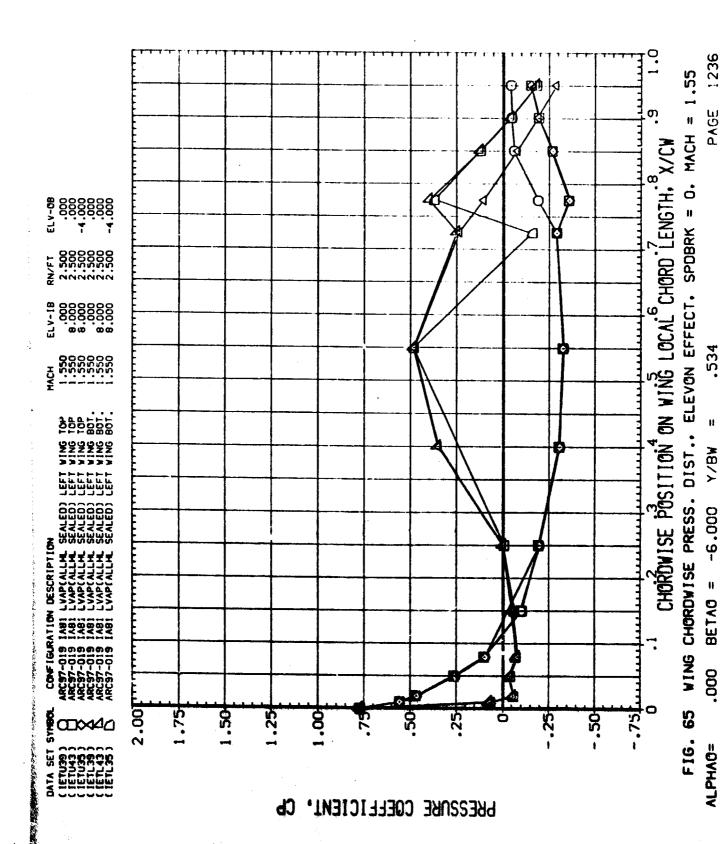


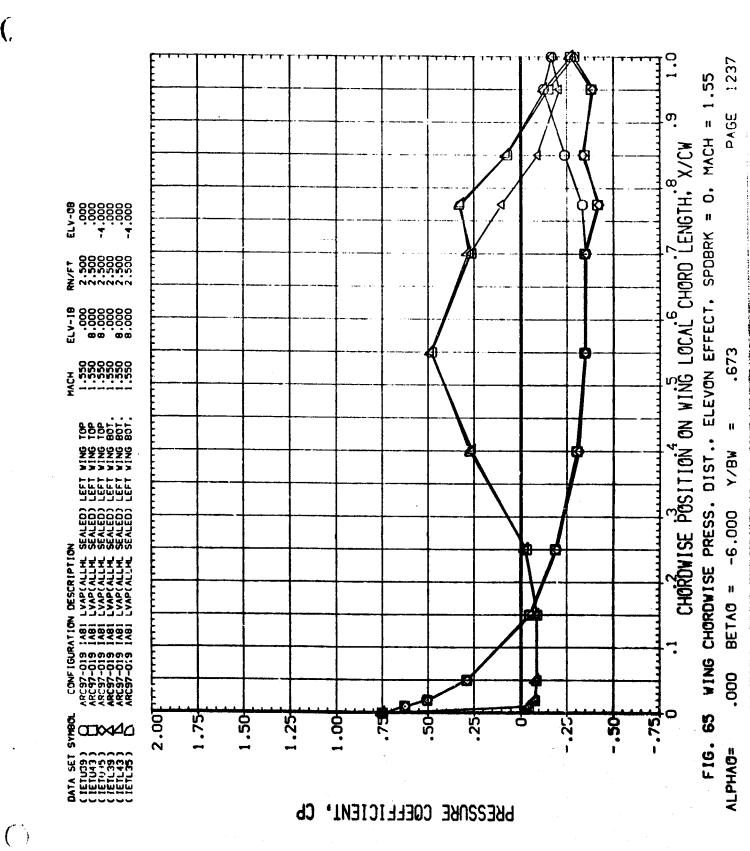
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MACH = 1.55PASE WING CHORDWISE PRESS. DIST., ELEVON EFFECT, SPDBRK = 0. .299 **4/84** -6.000 BETAG = 900 F16. 65 ALPHA0=

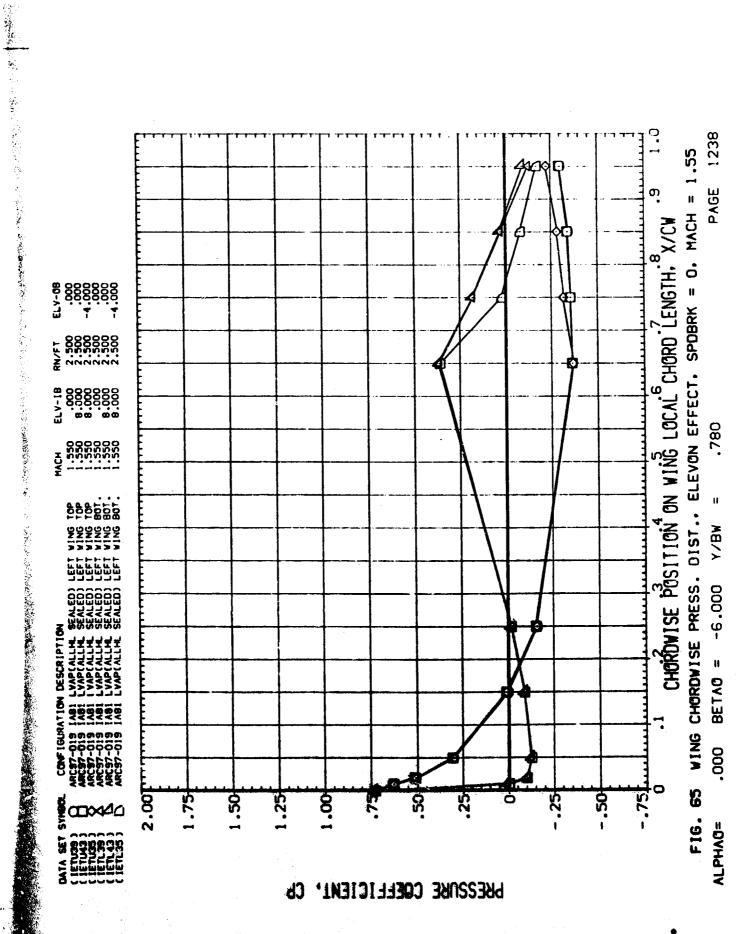


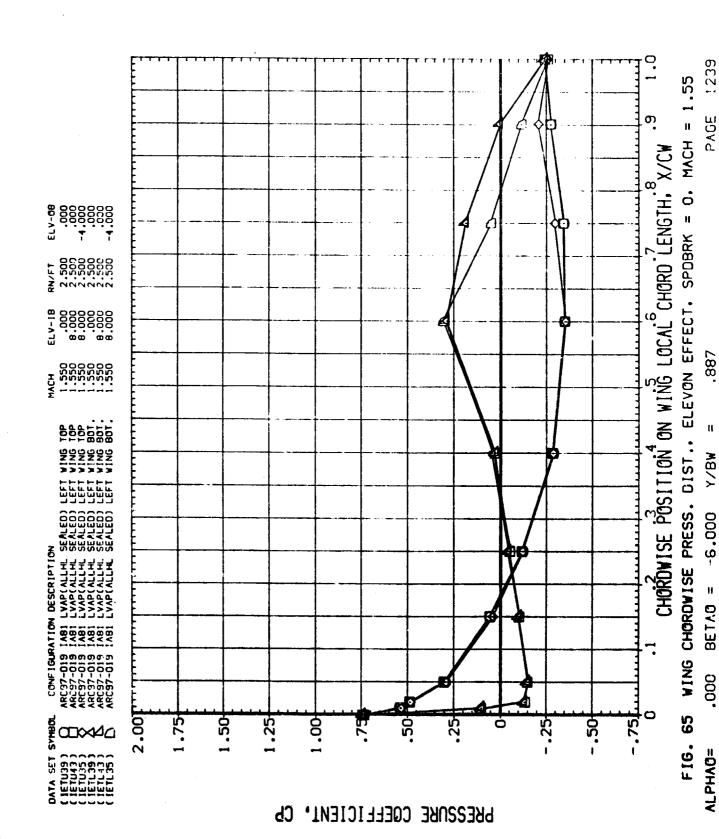






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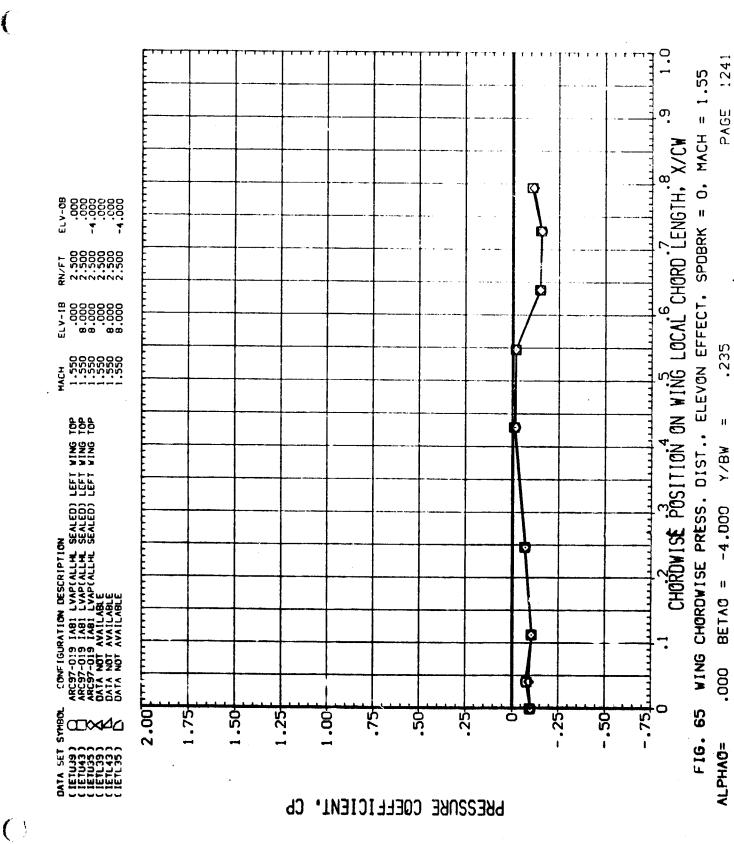
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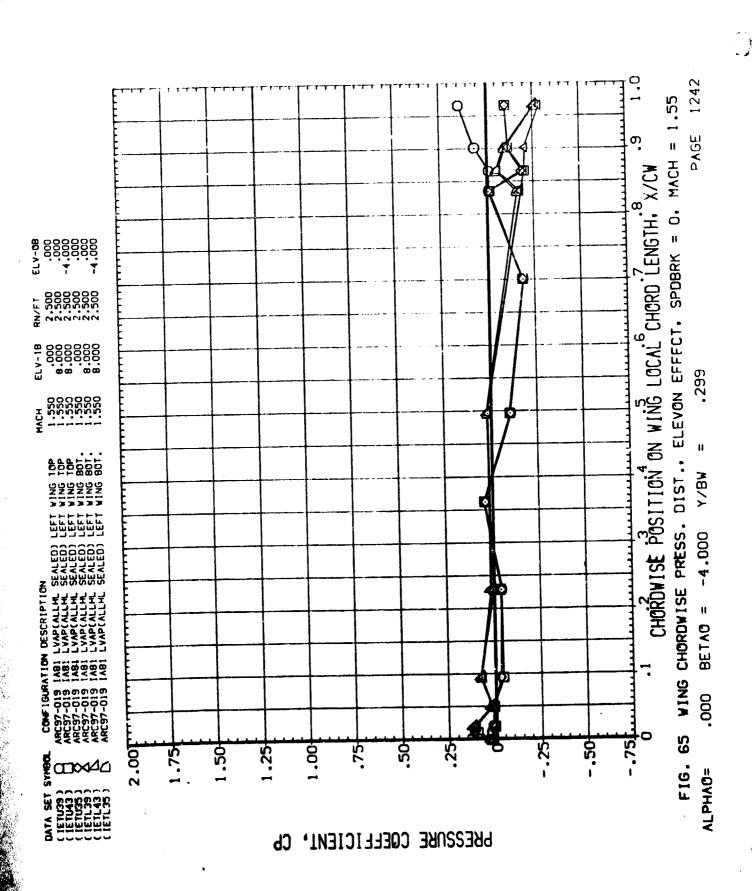
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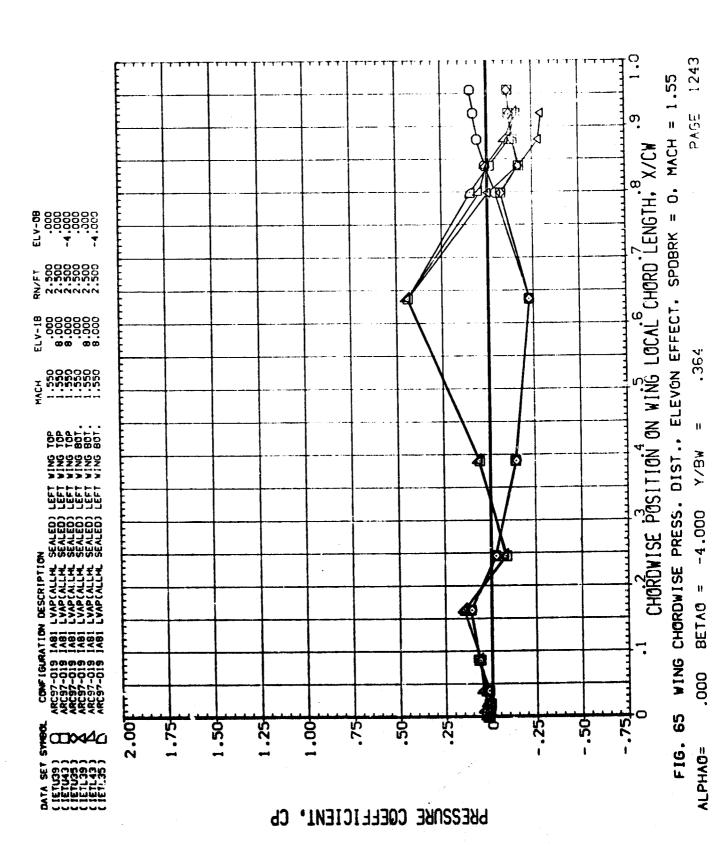
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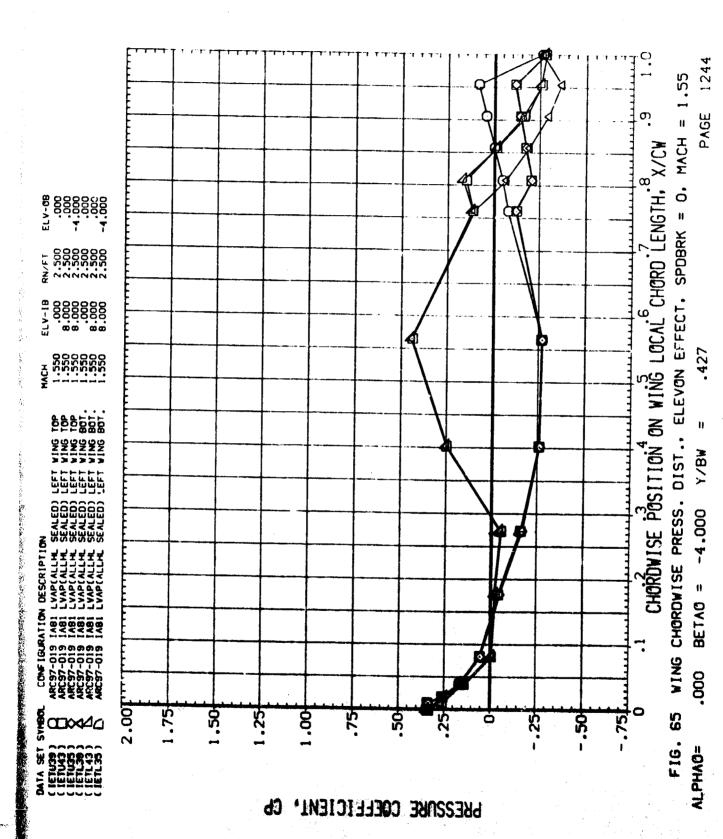
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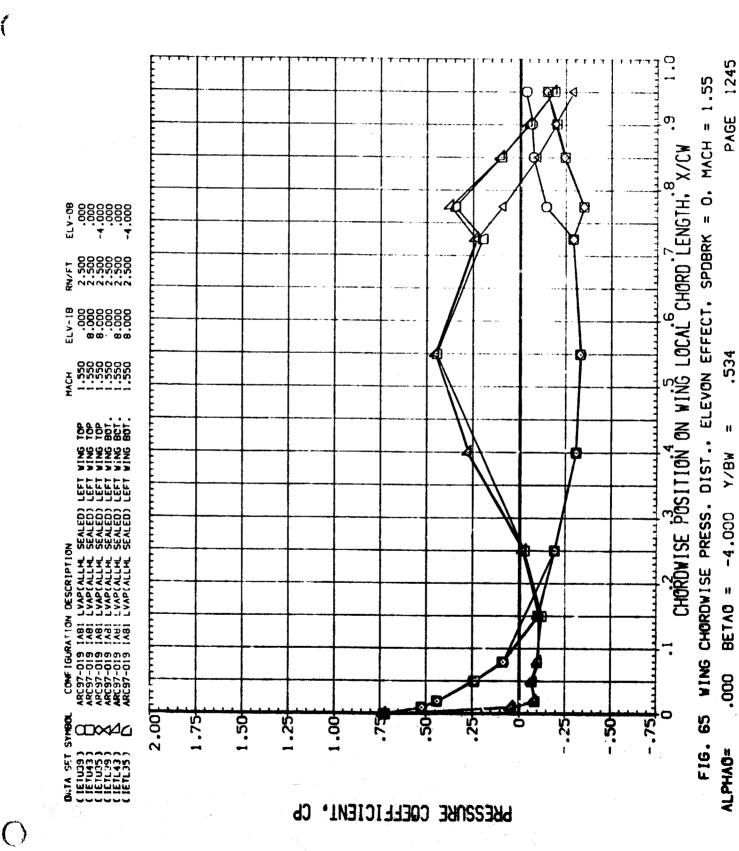
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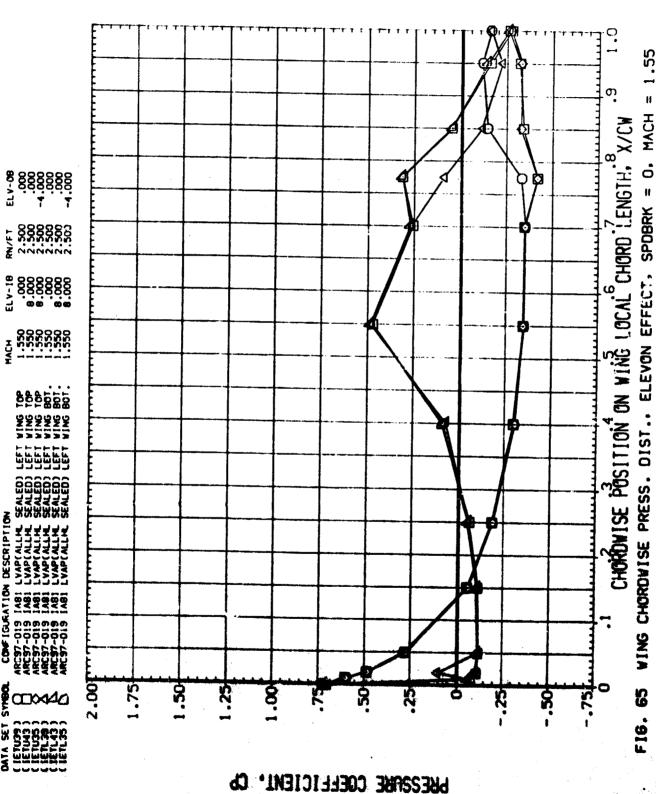






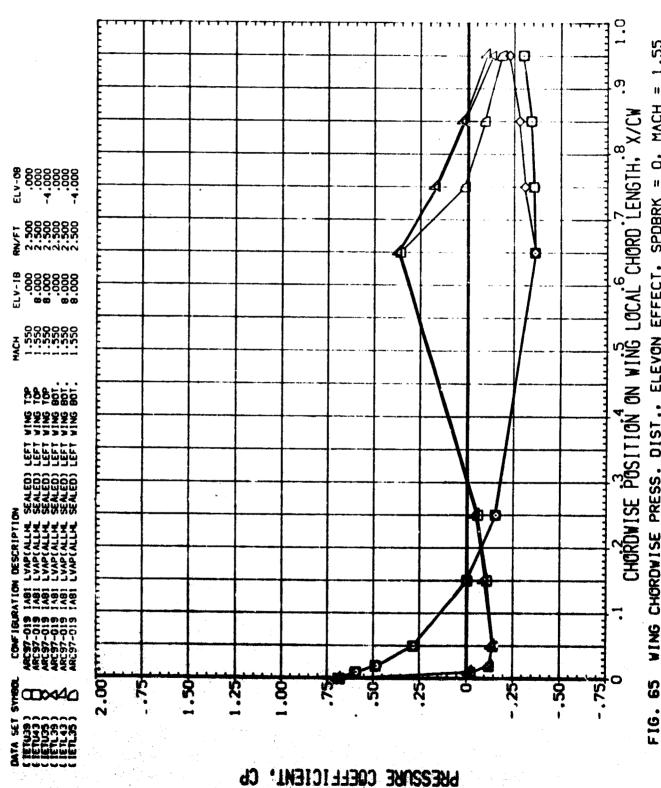






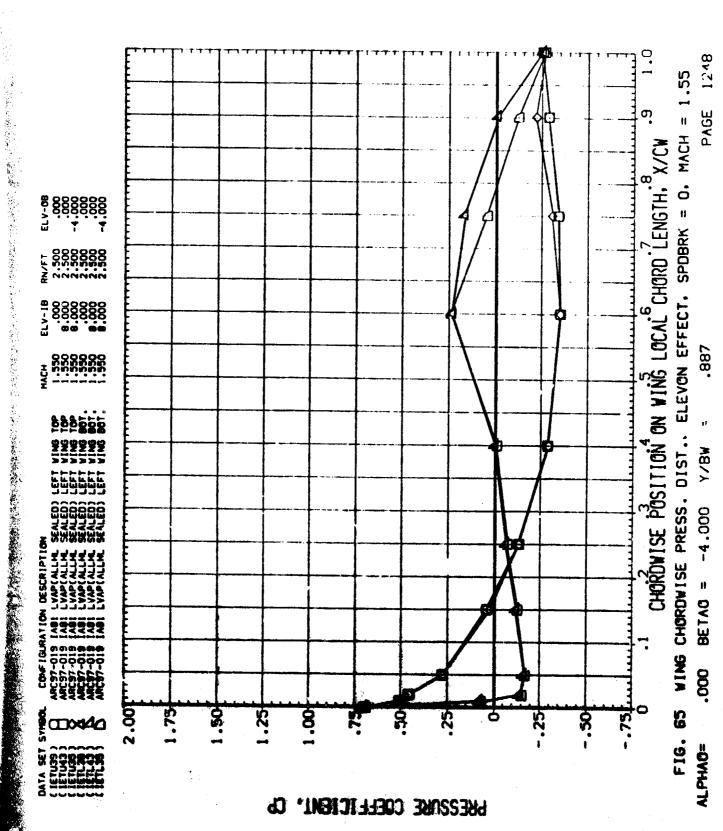
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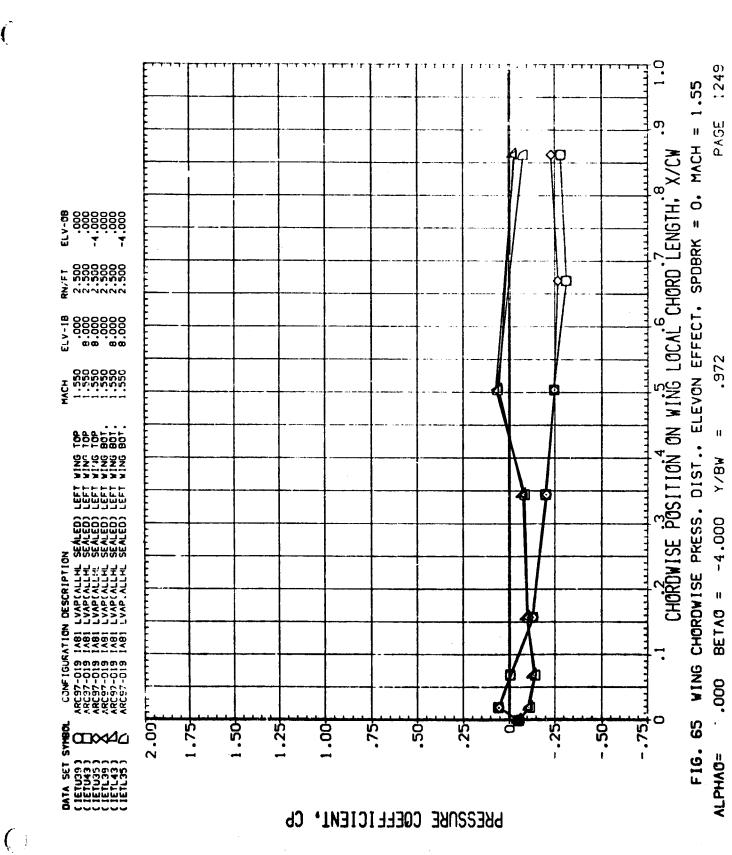
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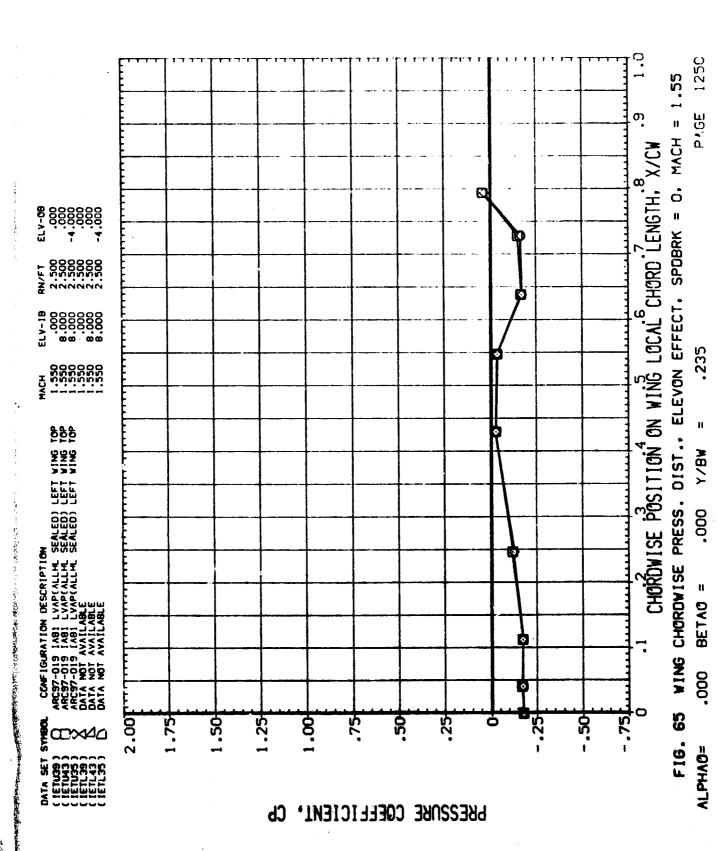
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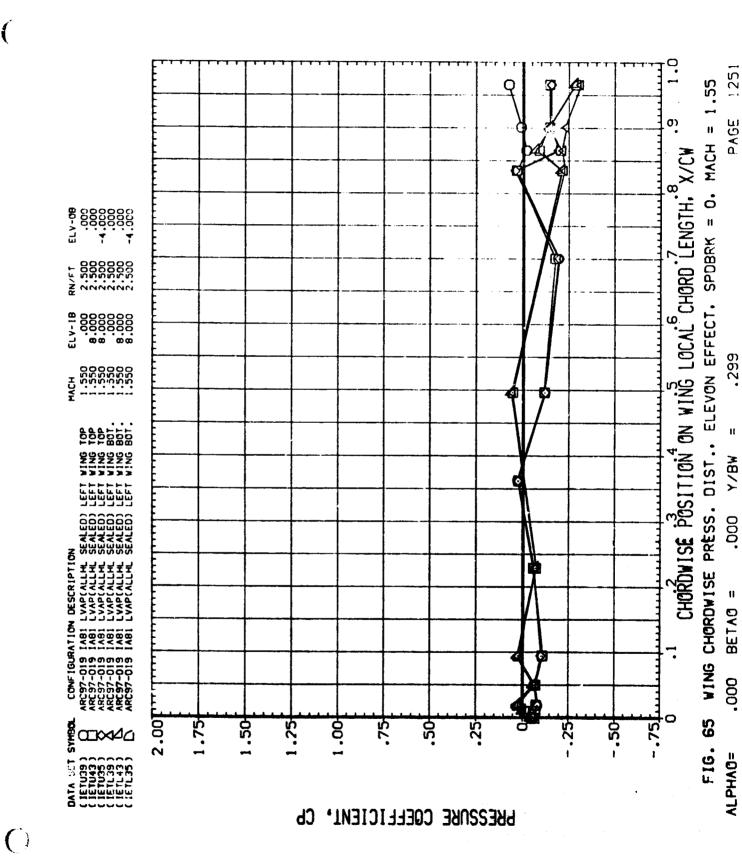
1247 WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPOBRK = 0, MACH = 1.55 PAGE .780 Y/BW -4.000 Ħ BETAO 900 F16. 65 ALPHAG=

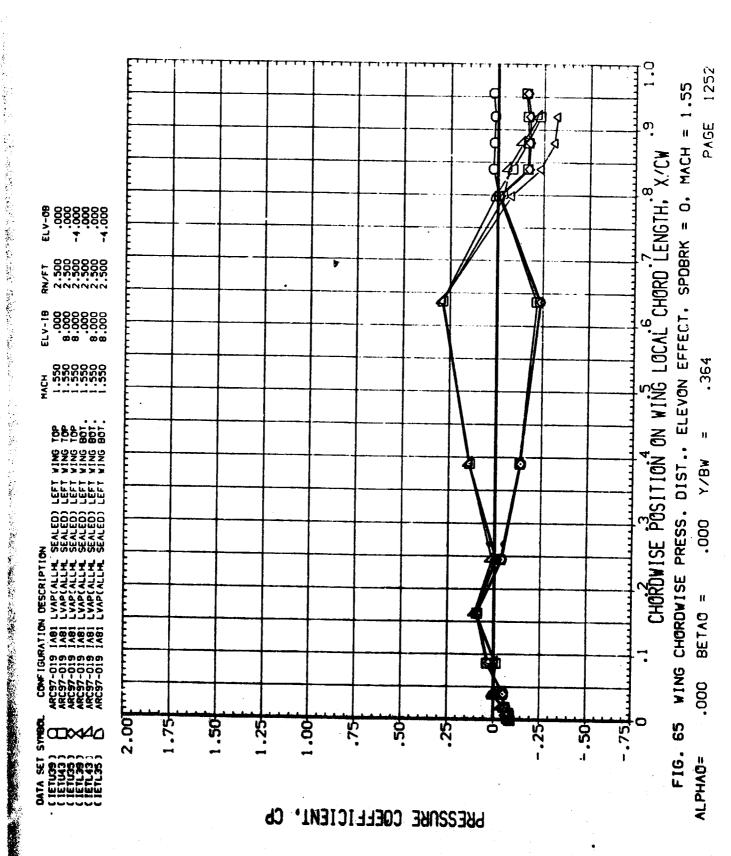


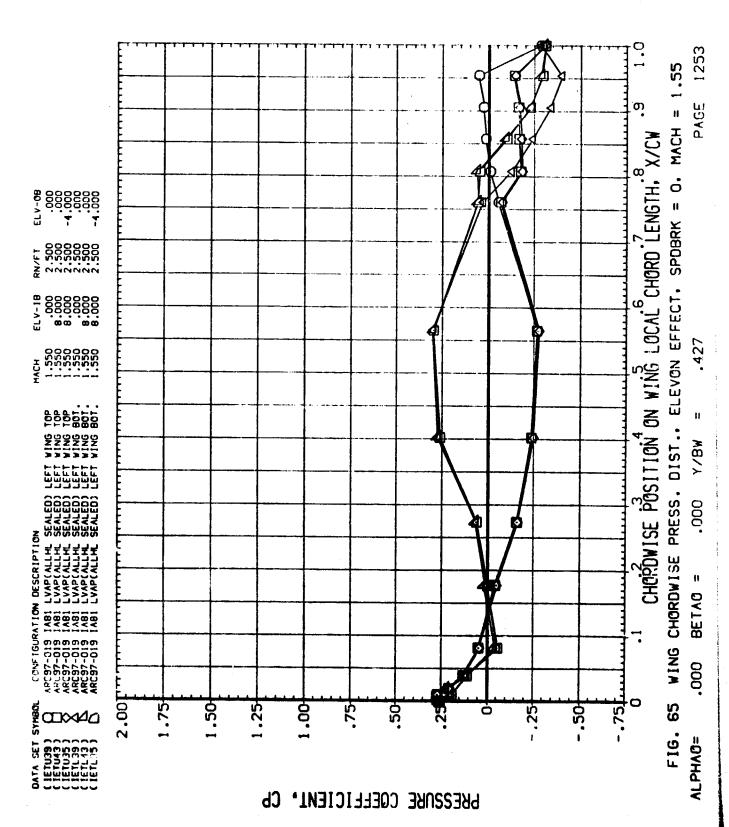


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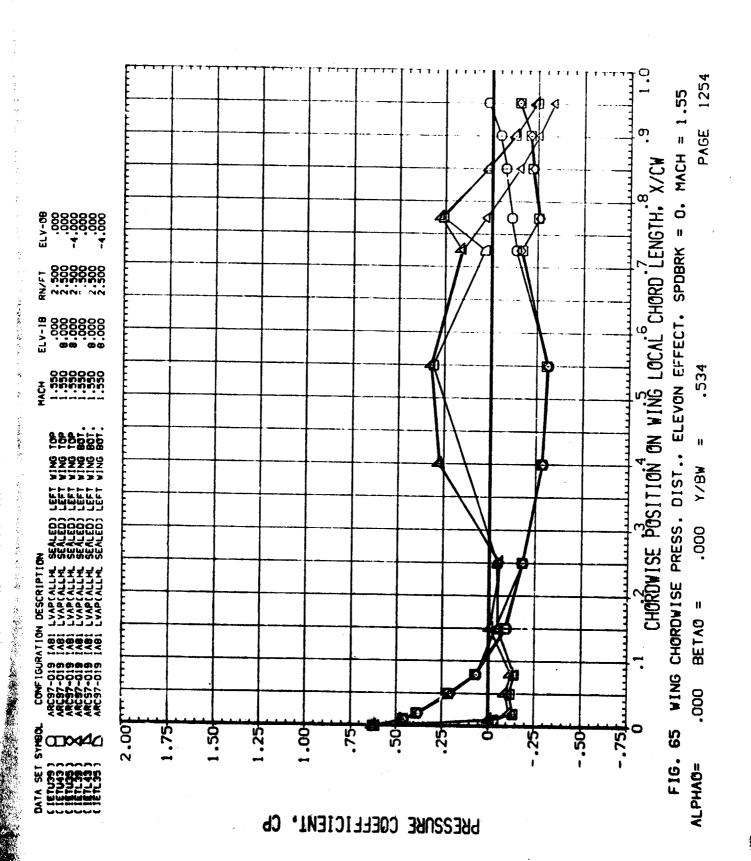


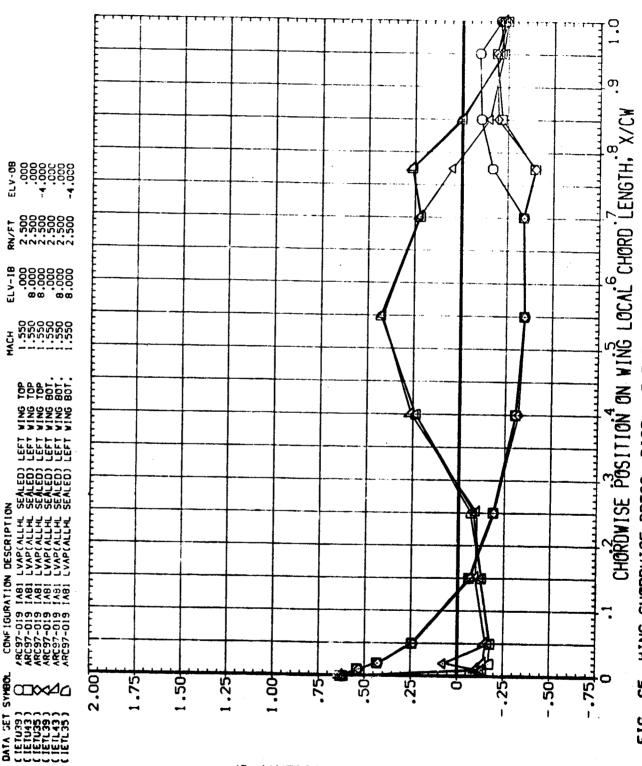






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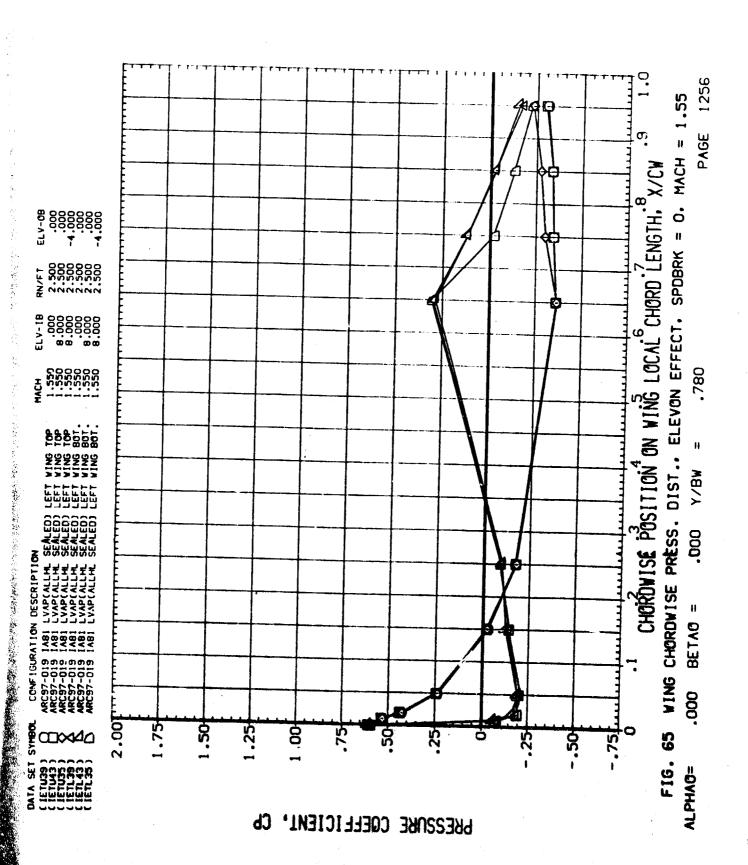
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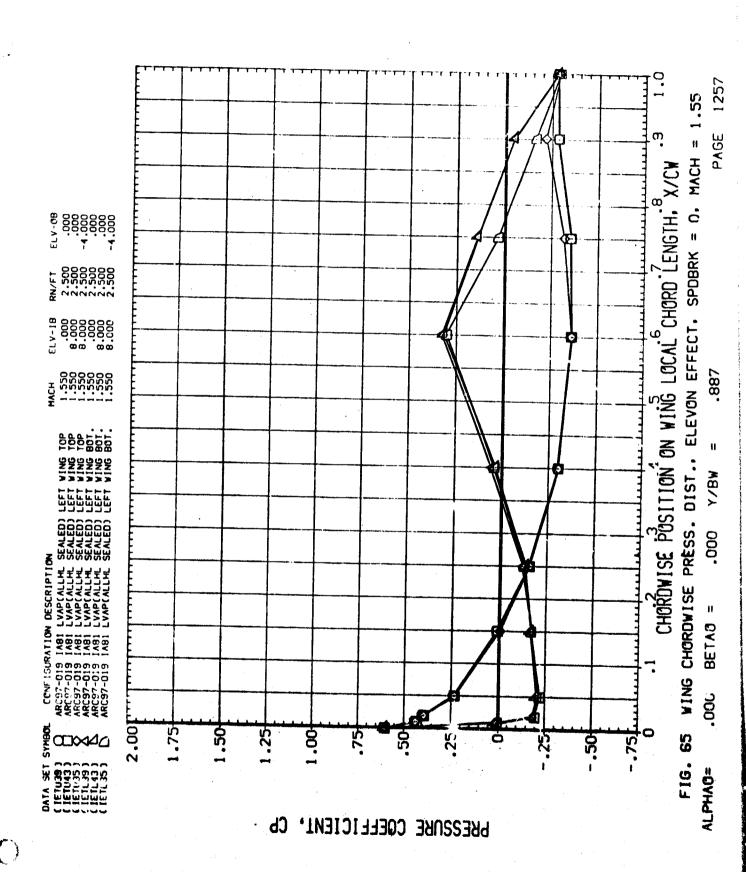
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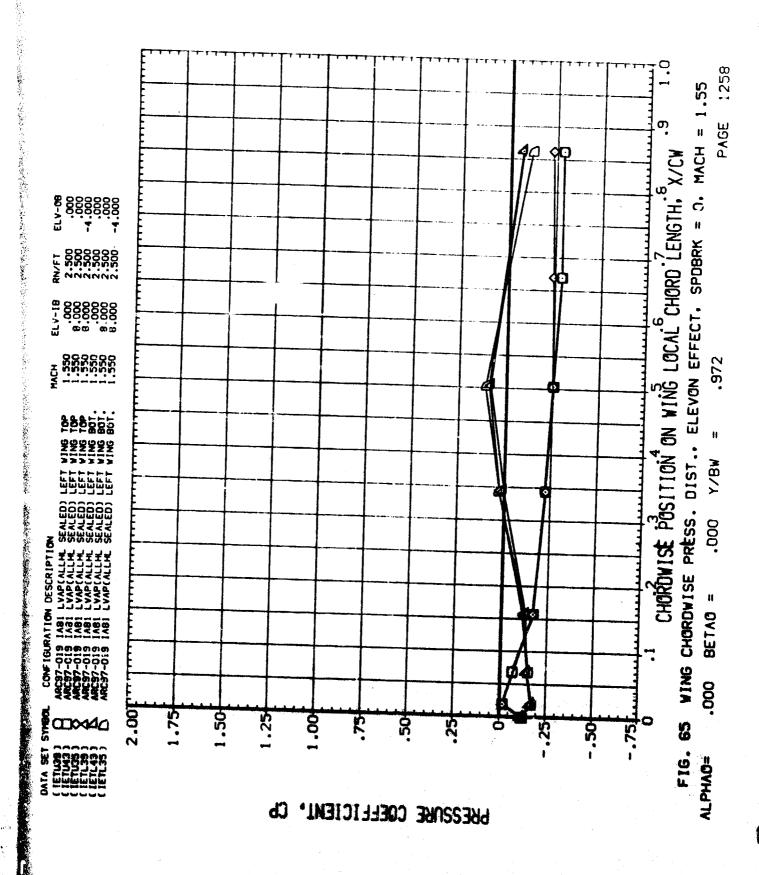
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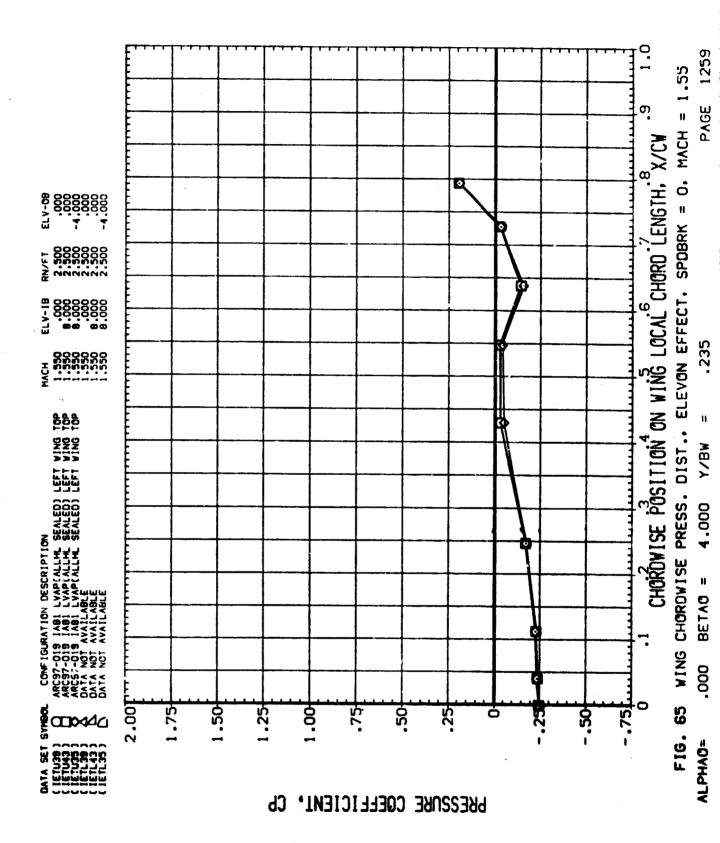
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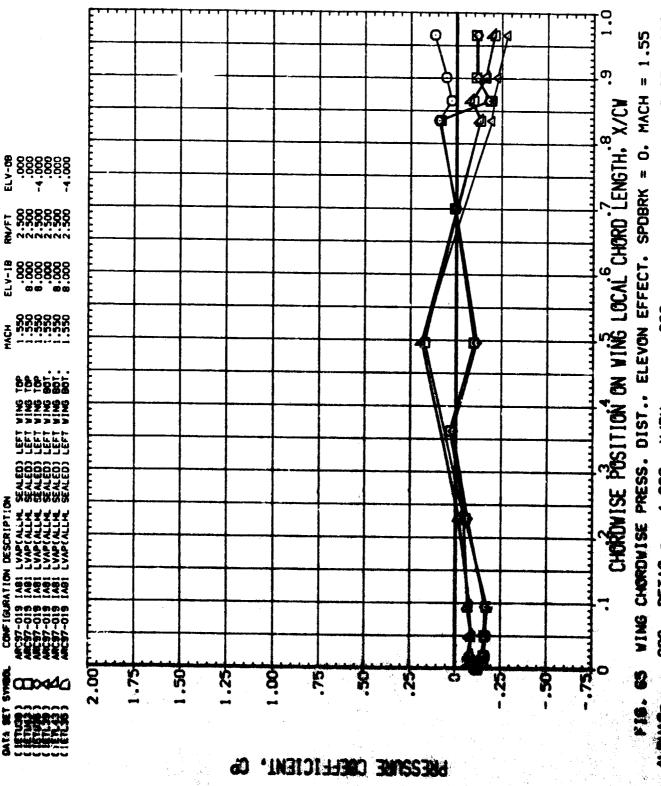






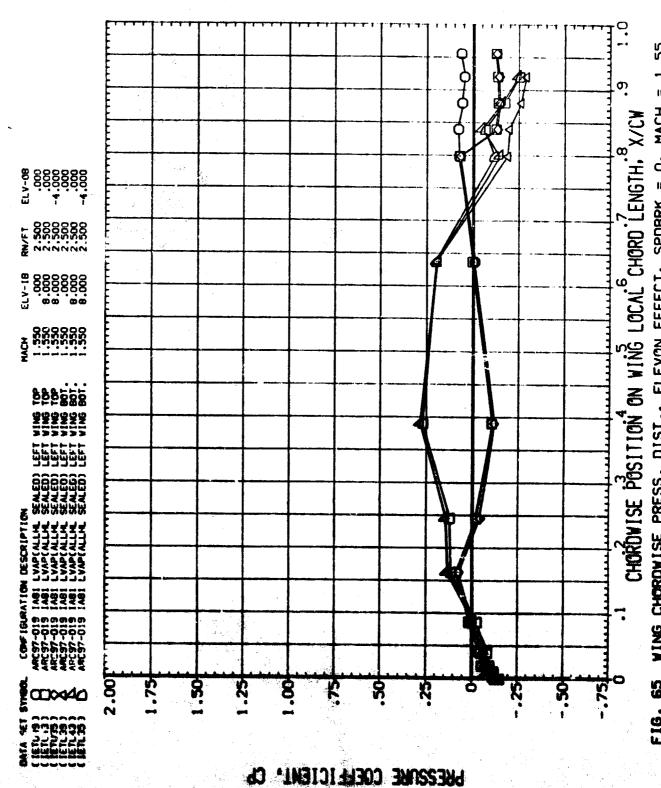
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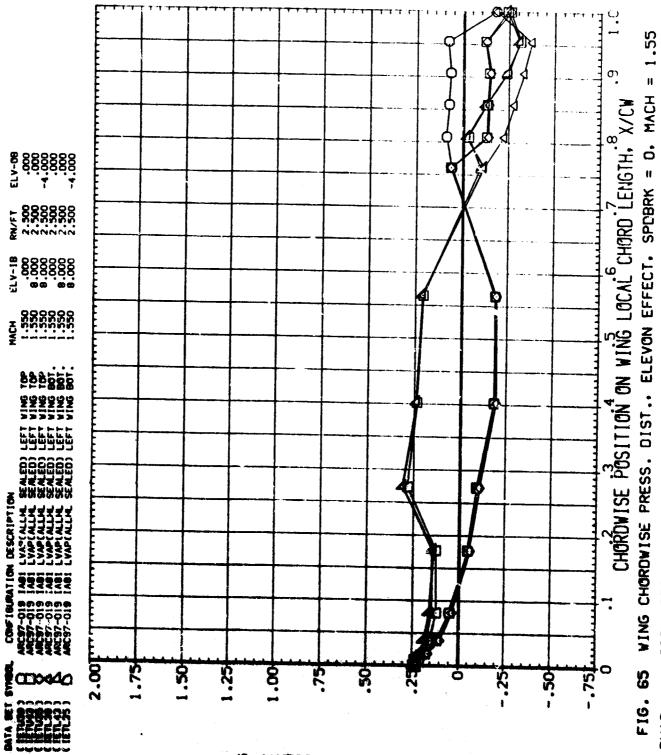
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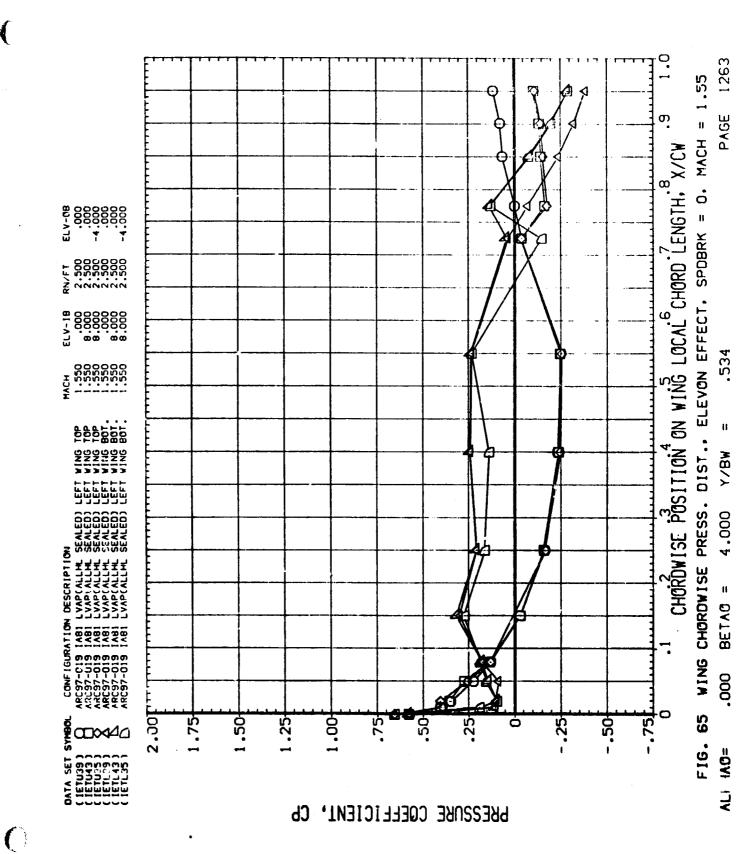
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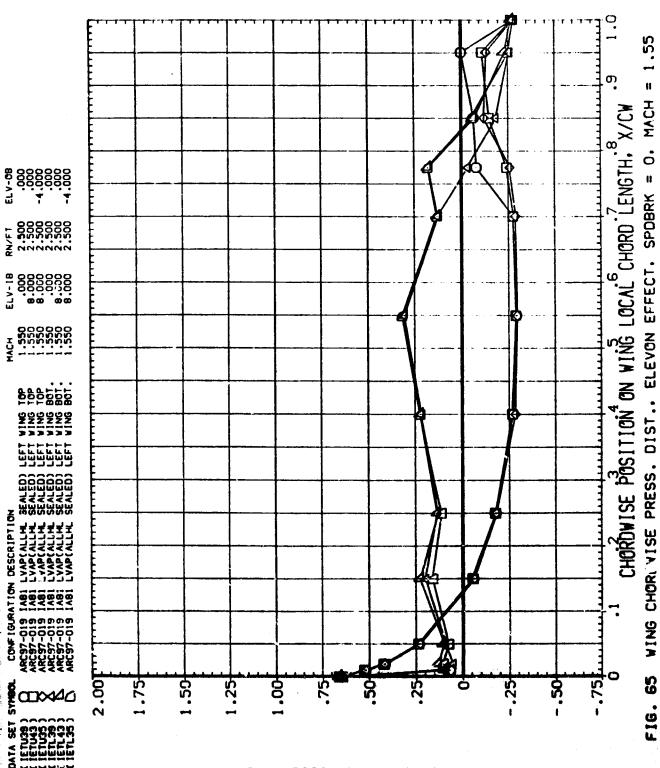
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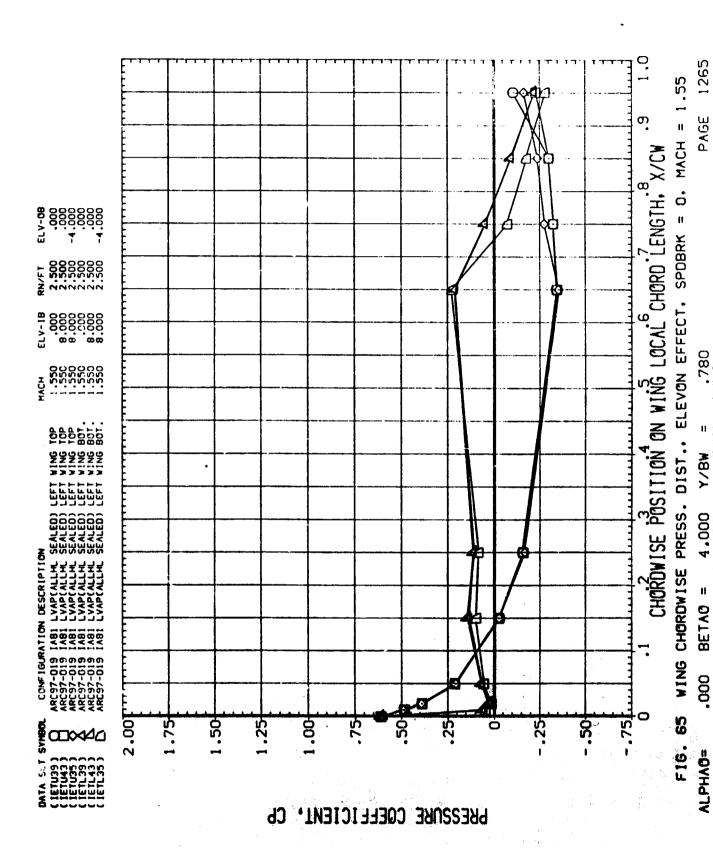
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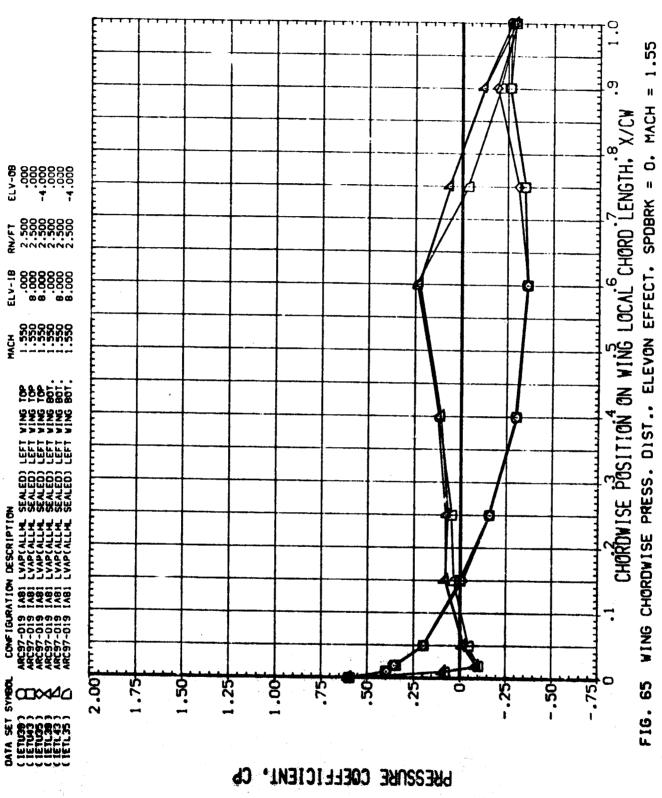
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ALPHA0=

PRESSURE COEFFICIENT, CP



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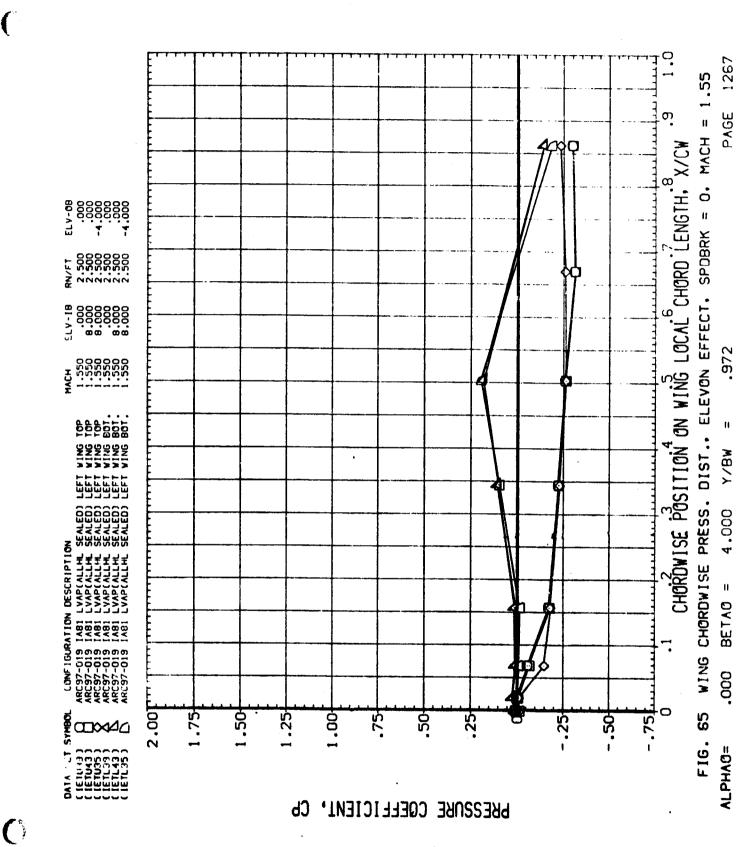
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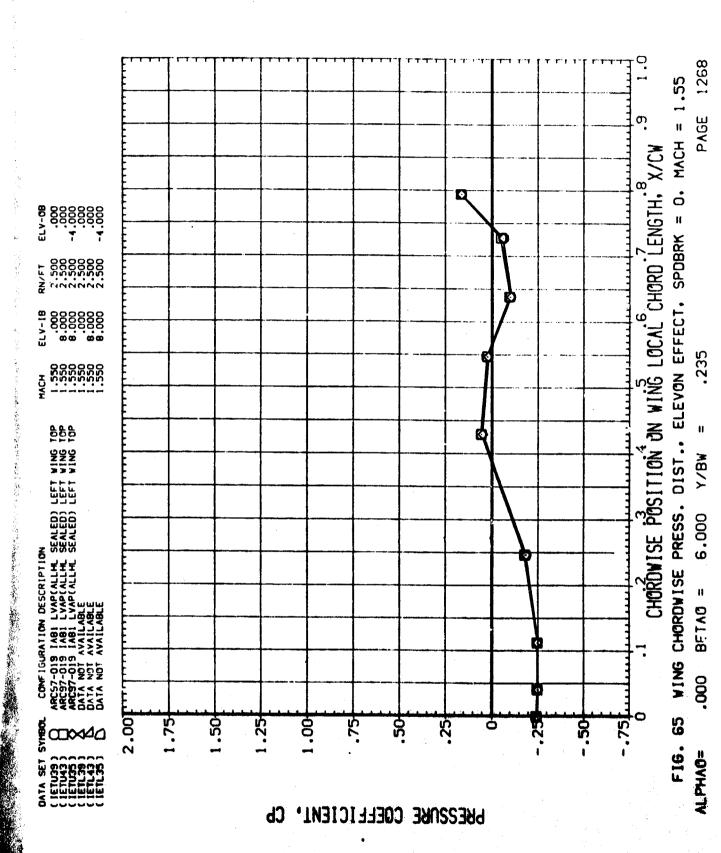
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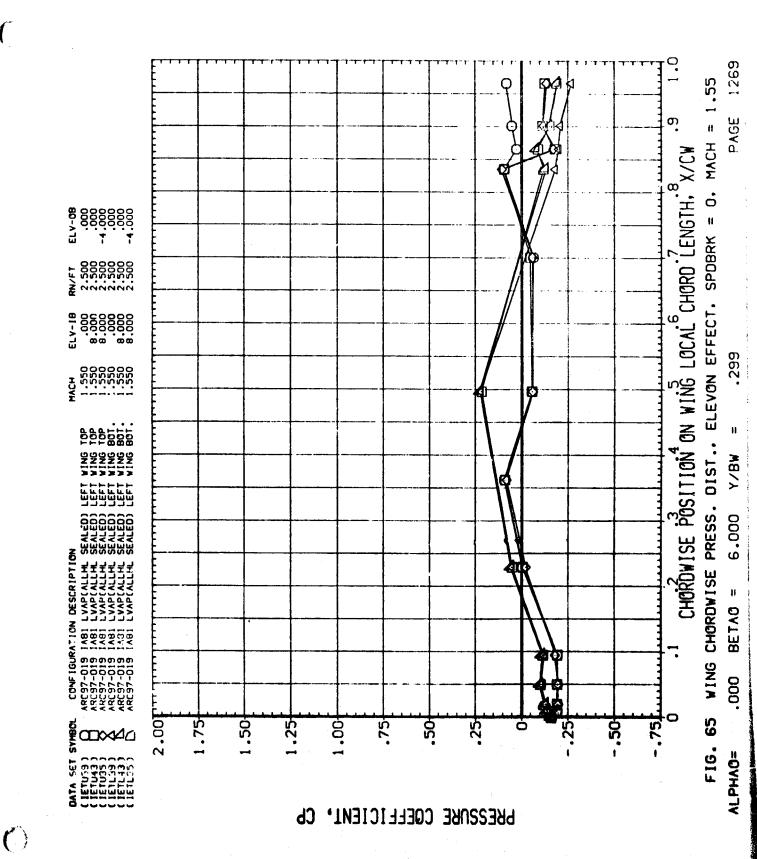
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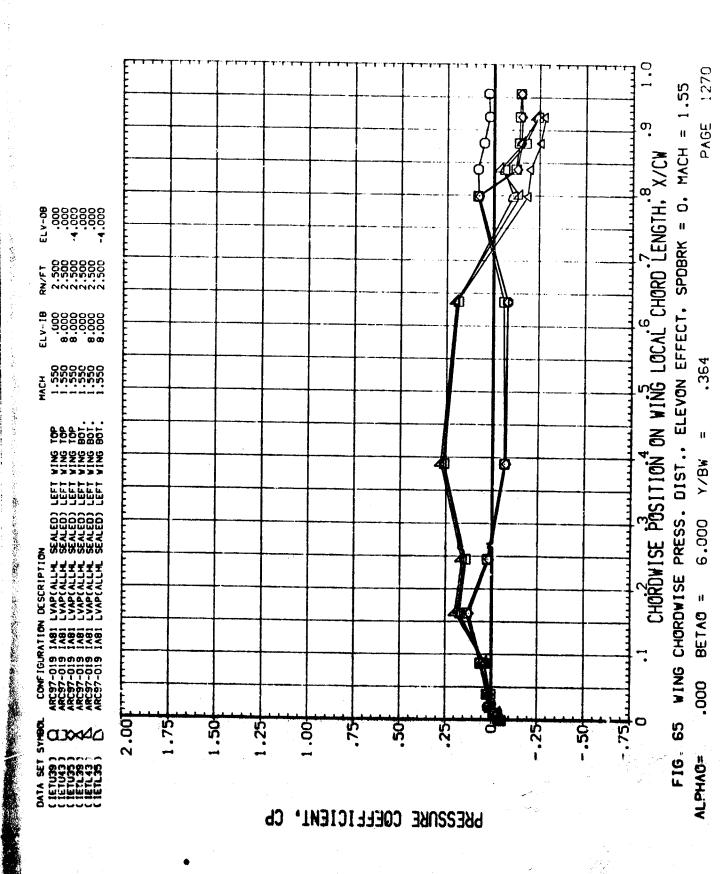
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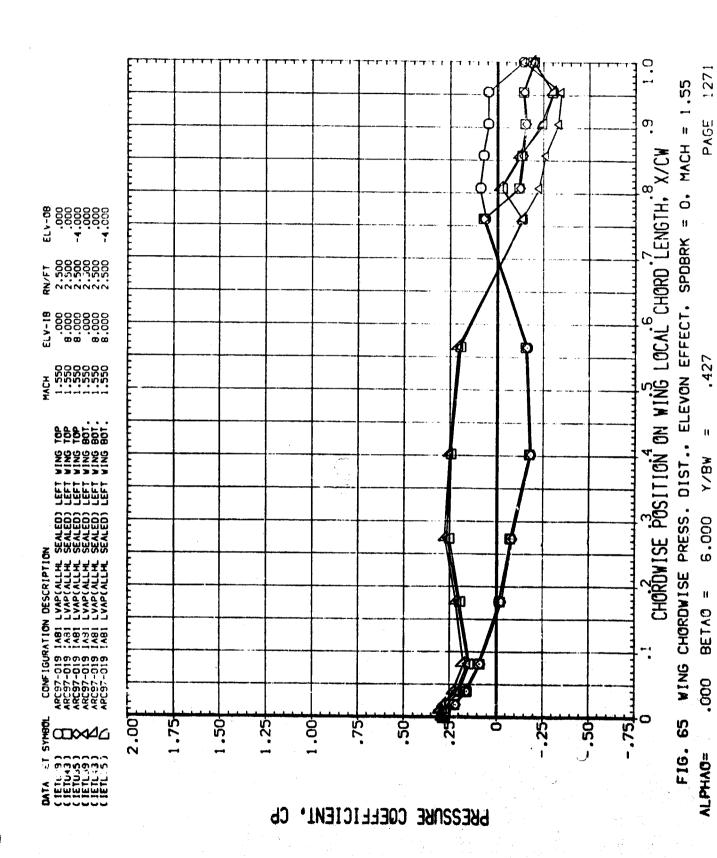
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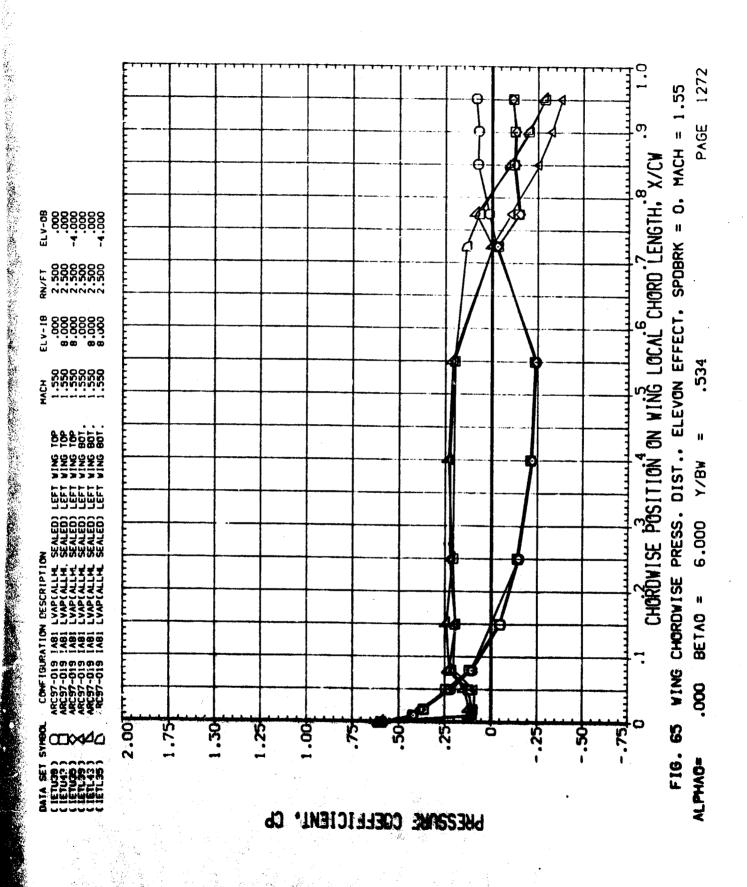


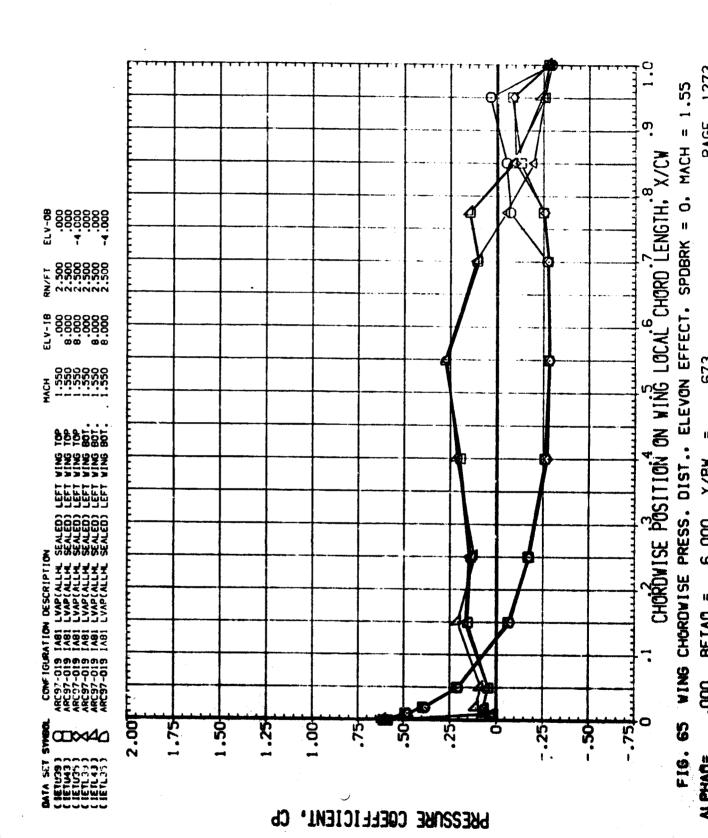




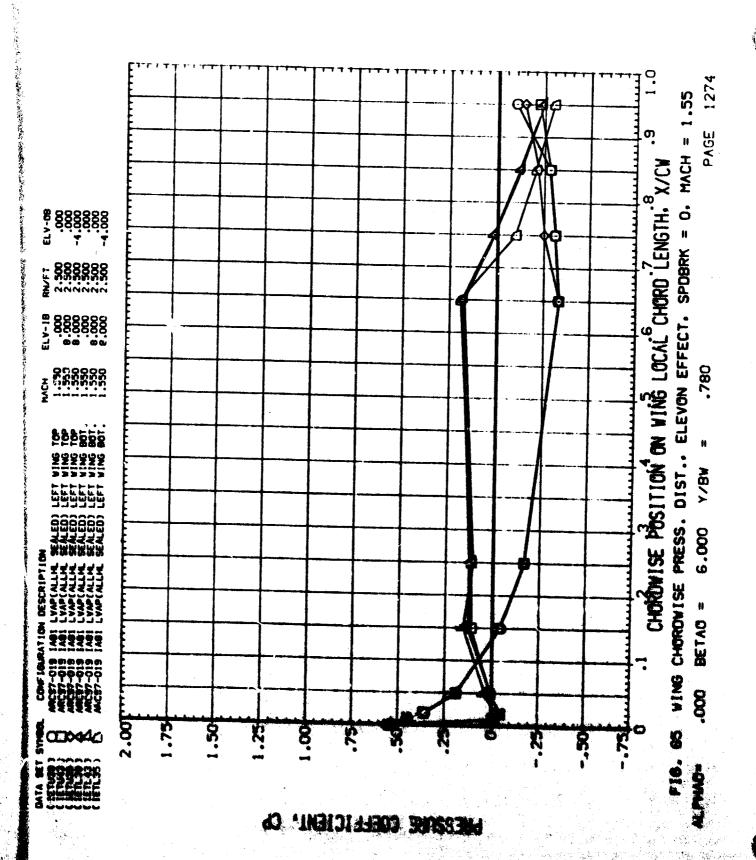


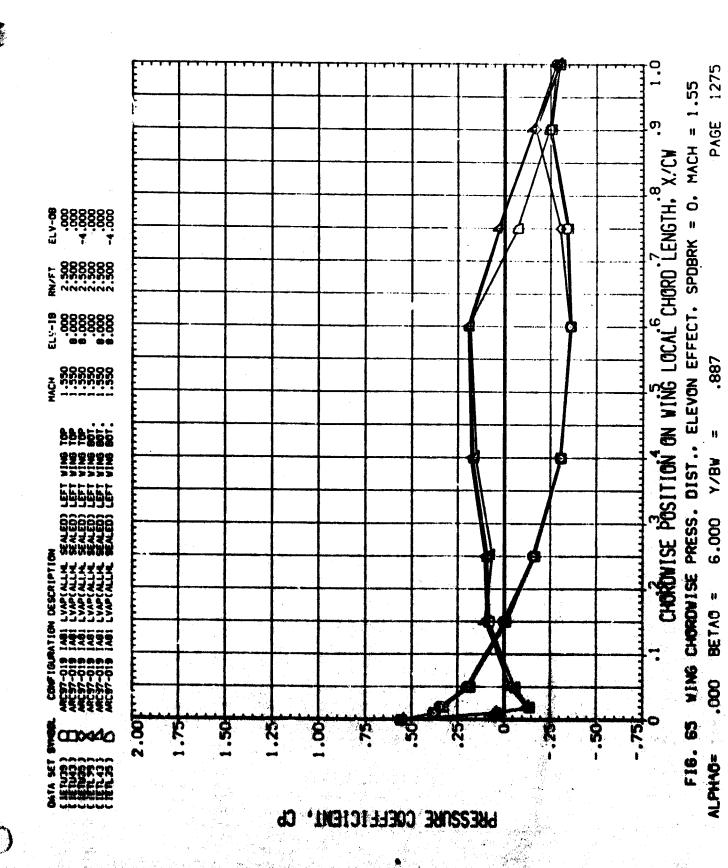


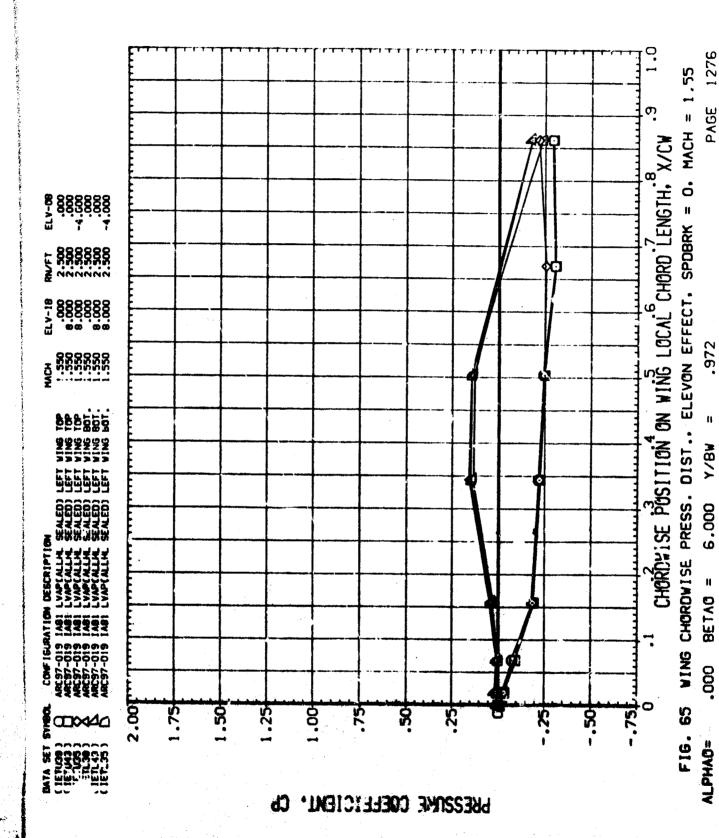


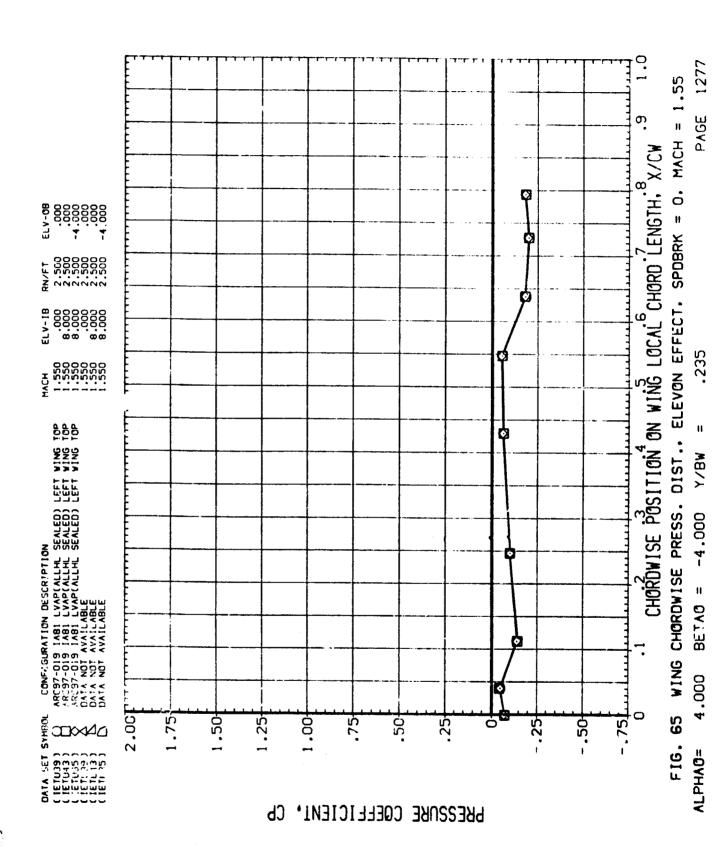


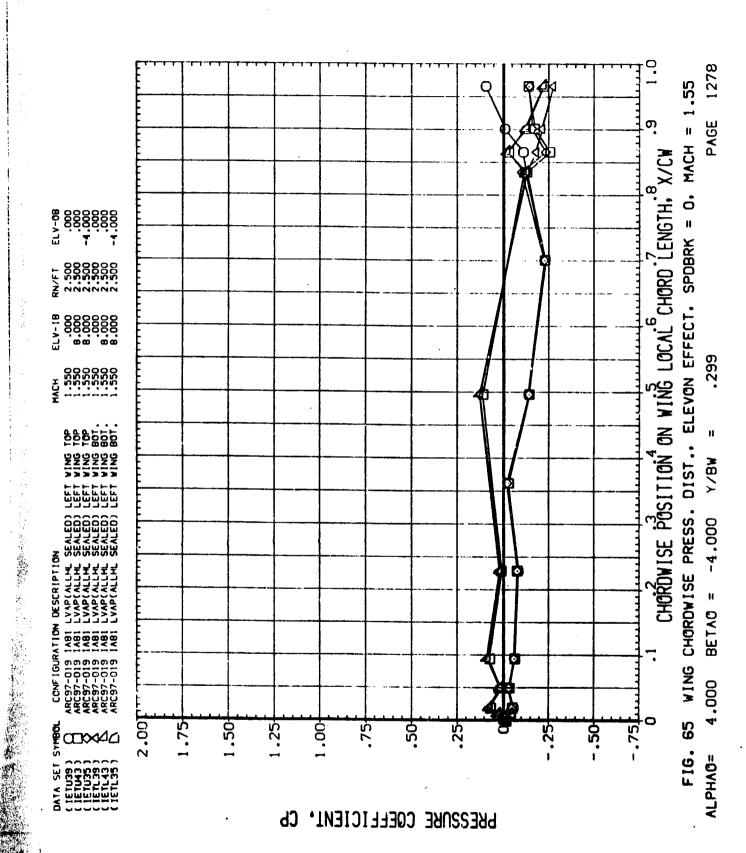
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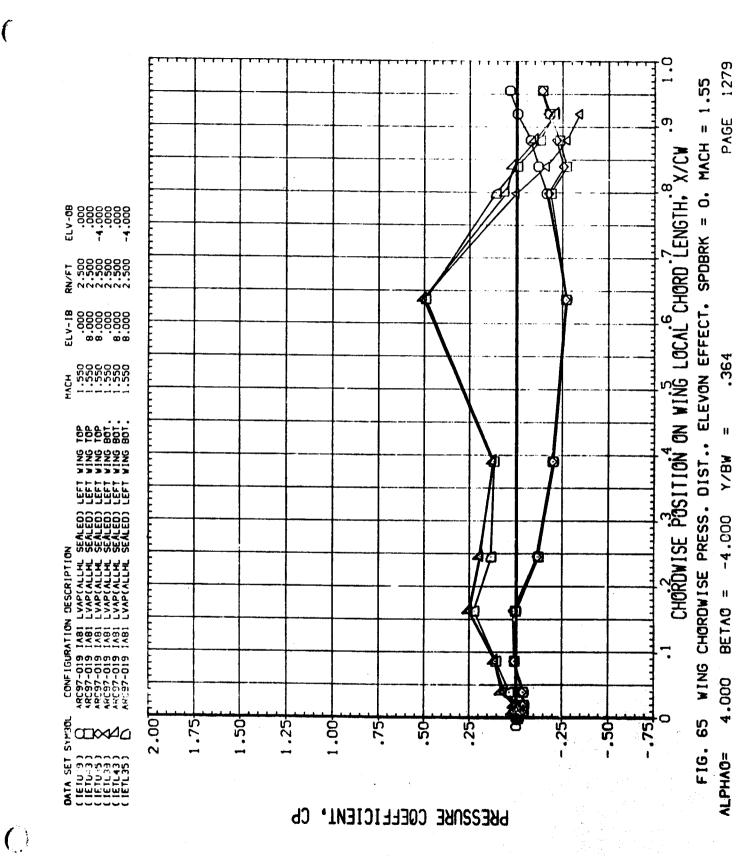




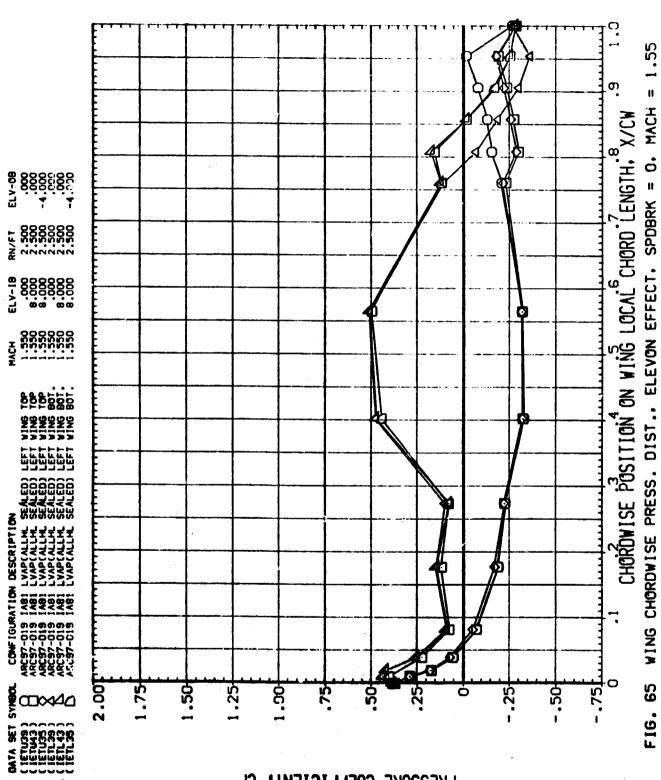








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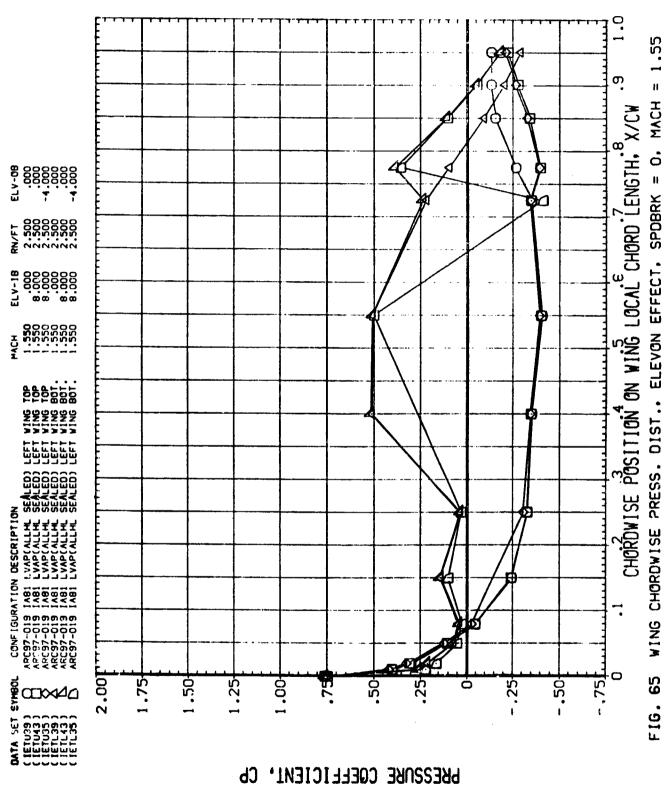
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PRESSURE COEFFICIENT, CP



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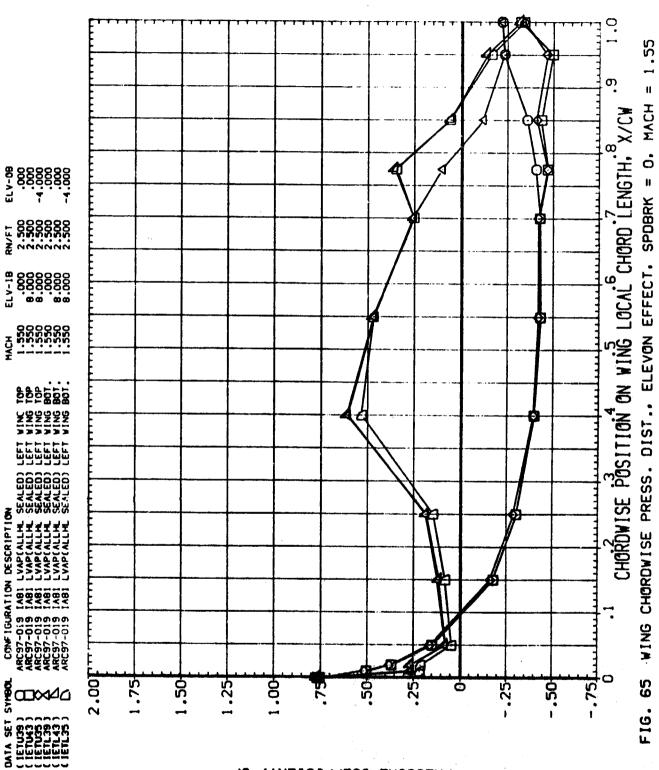
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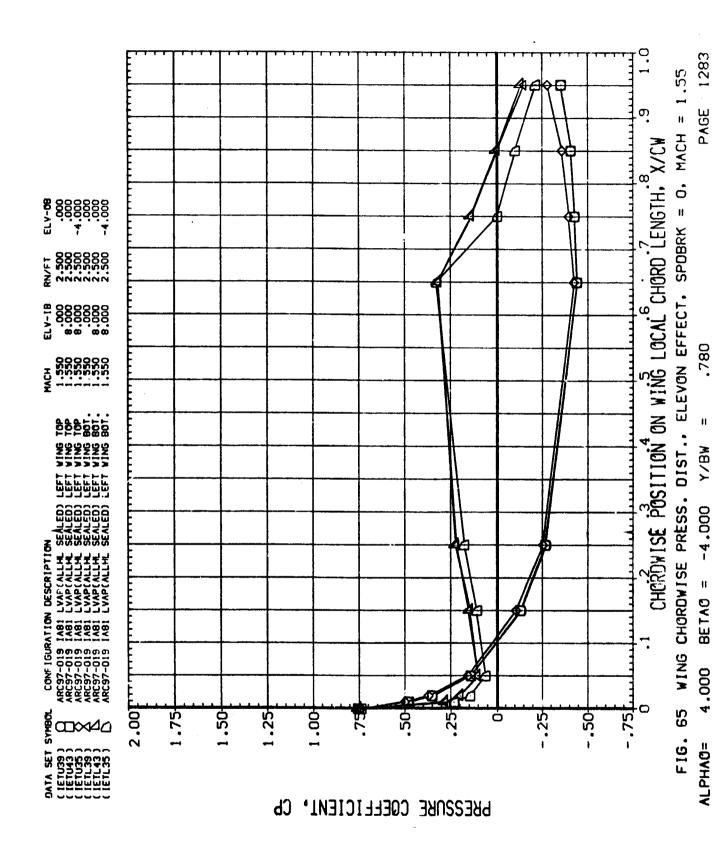
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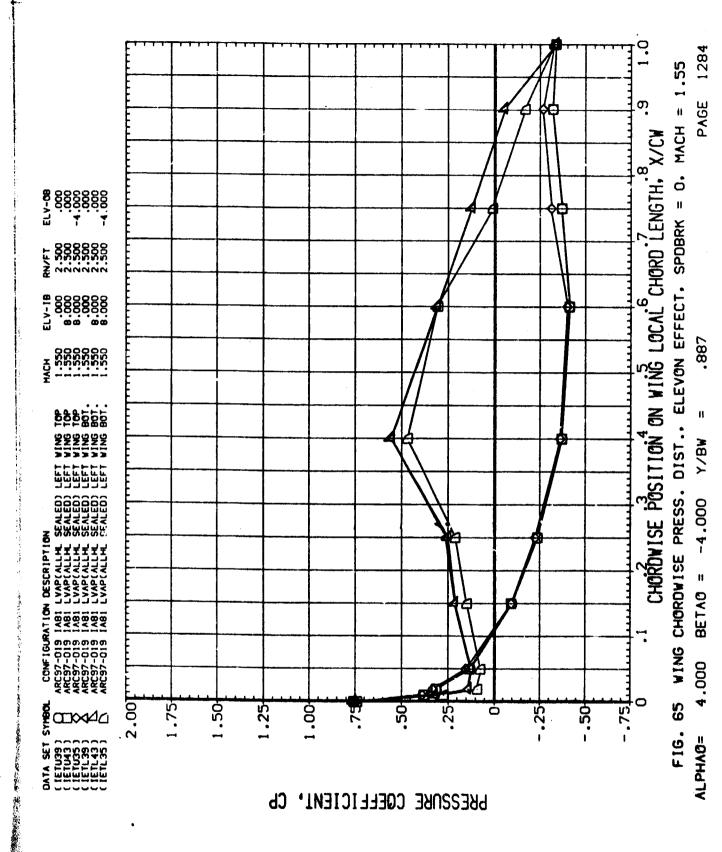
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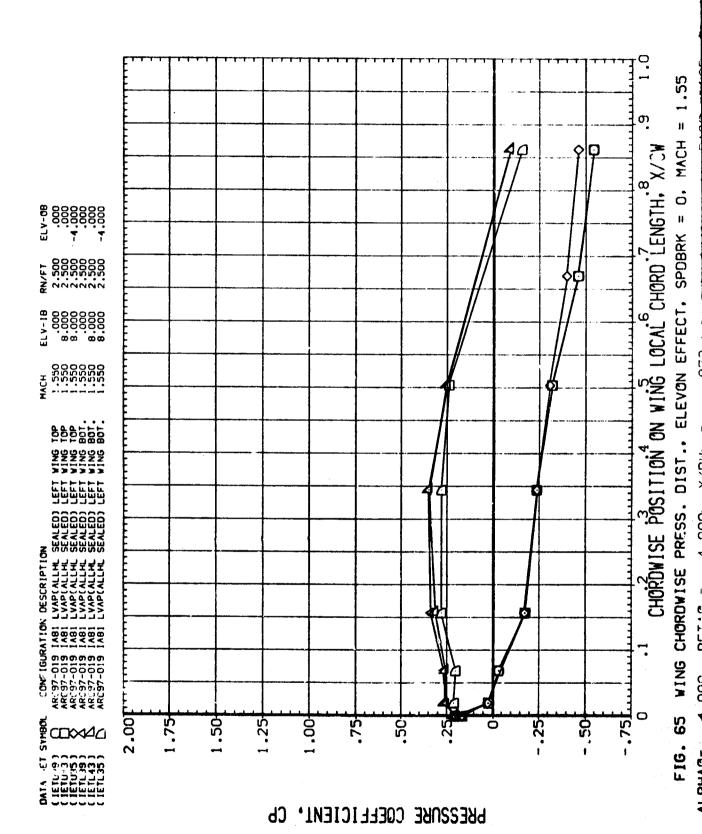
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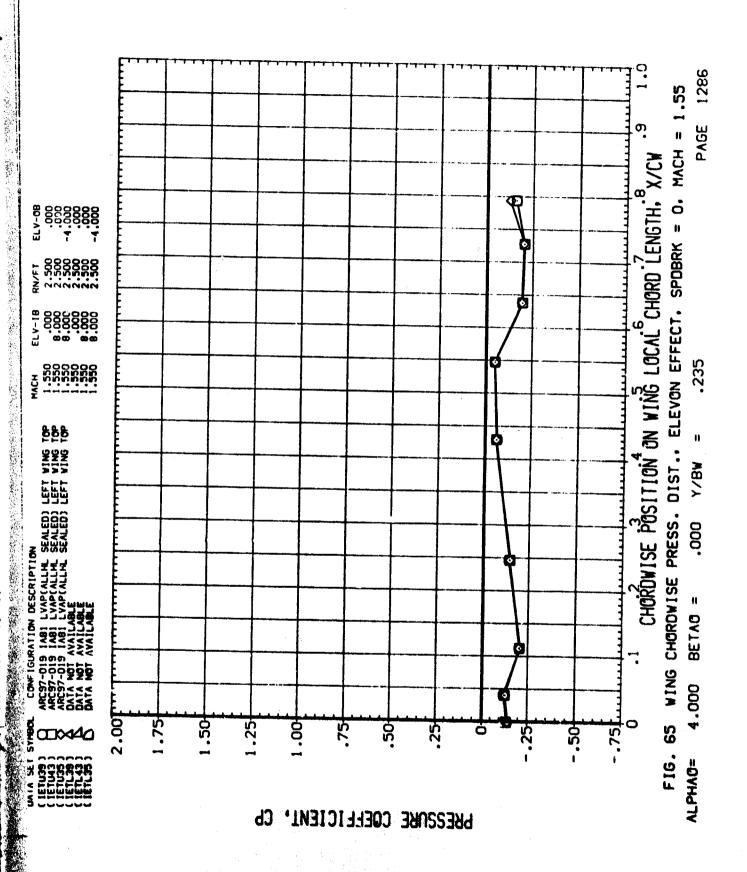
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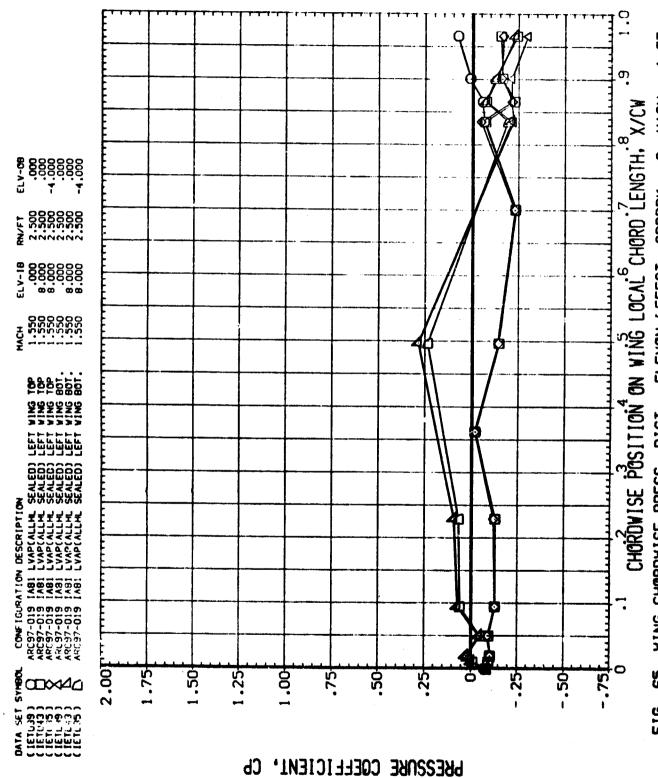


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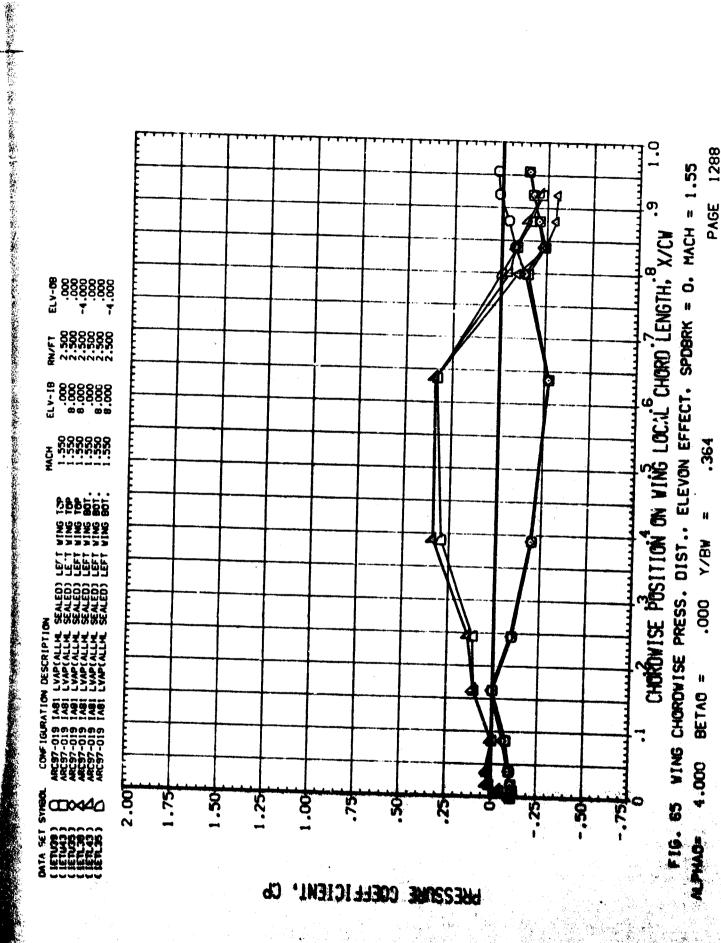


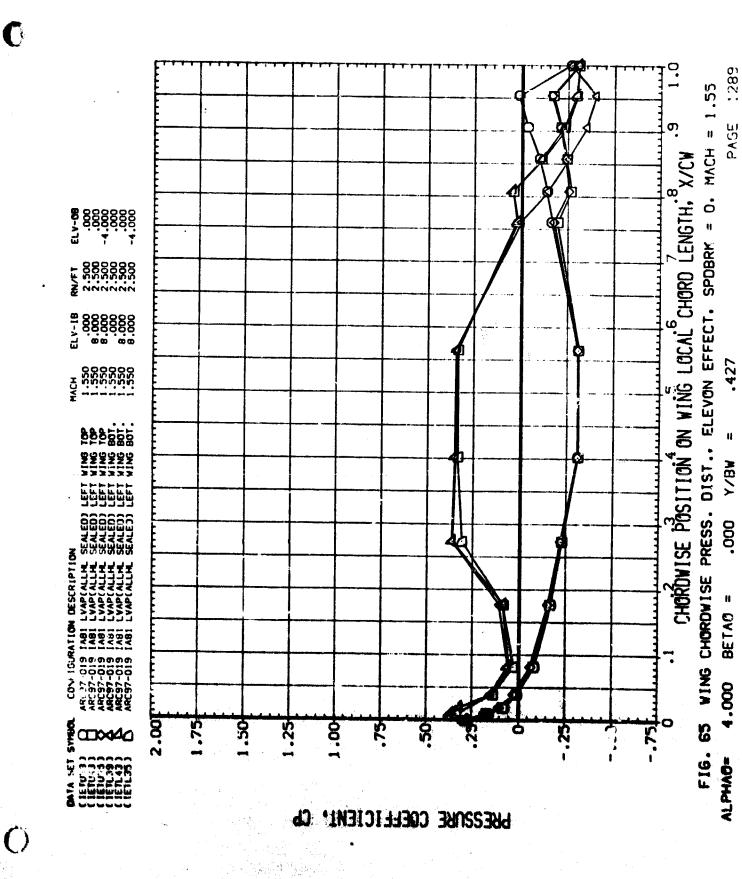


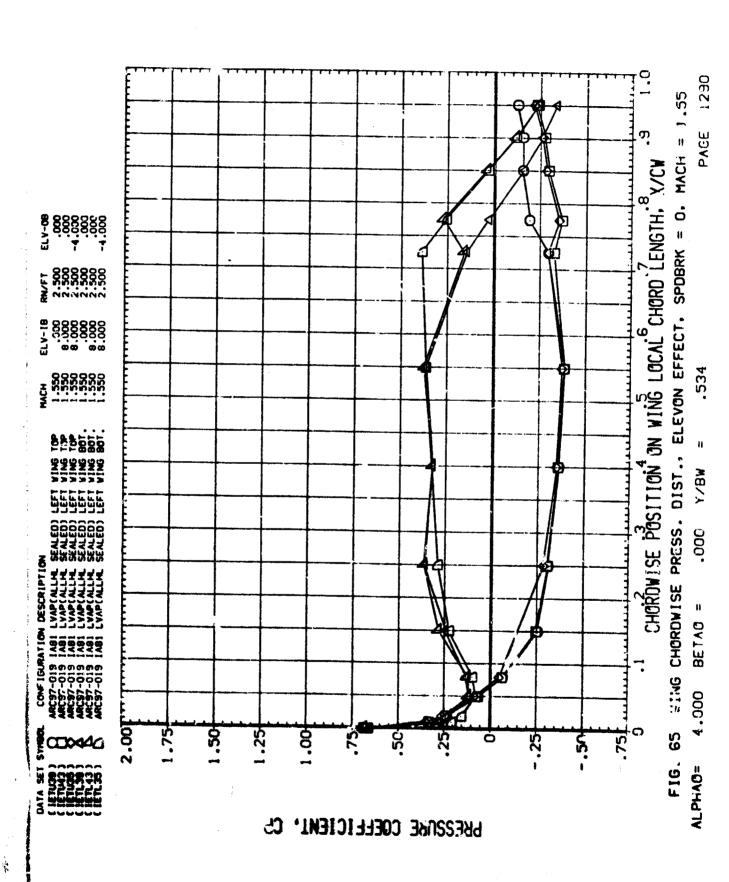


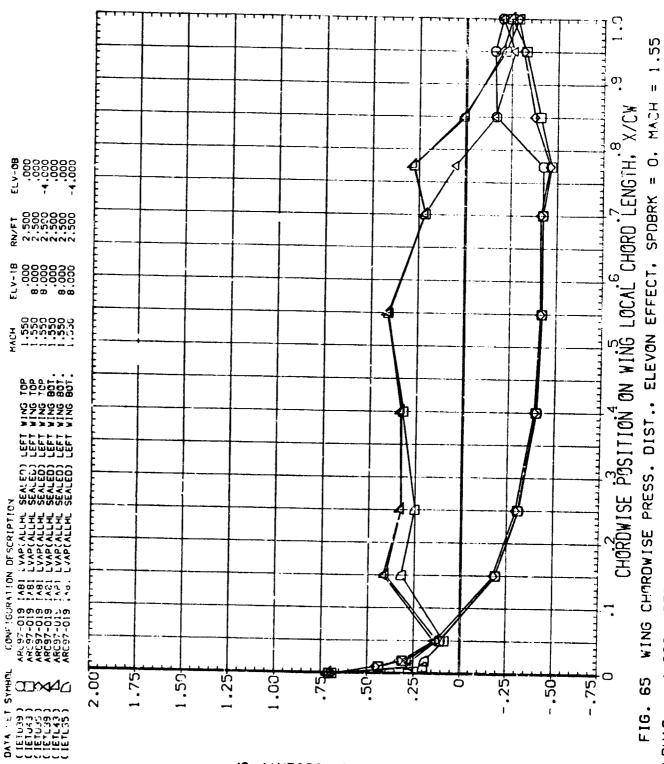


1287 FIG. 65 WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPDBRK = 0, MACH = 1.55 PAGE Y/BW 000. BETAG =









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X/3W

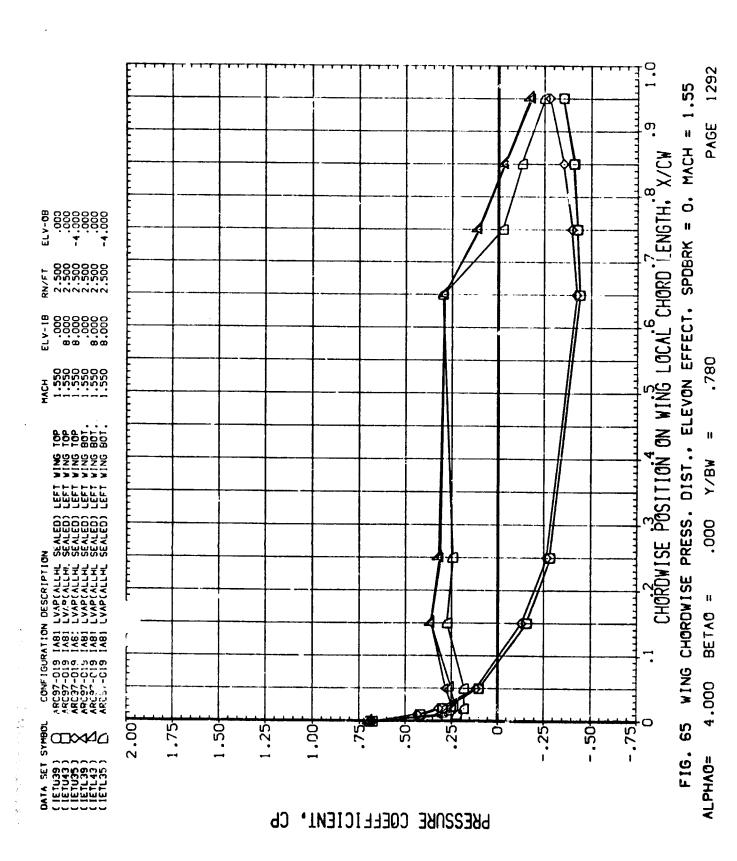
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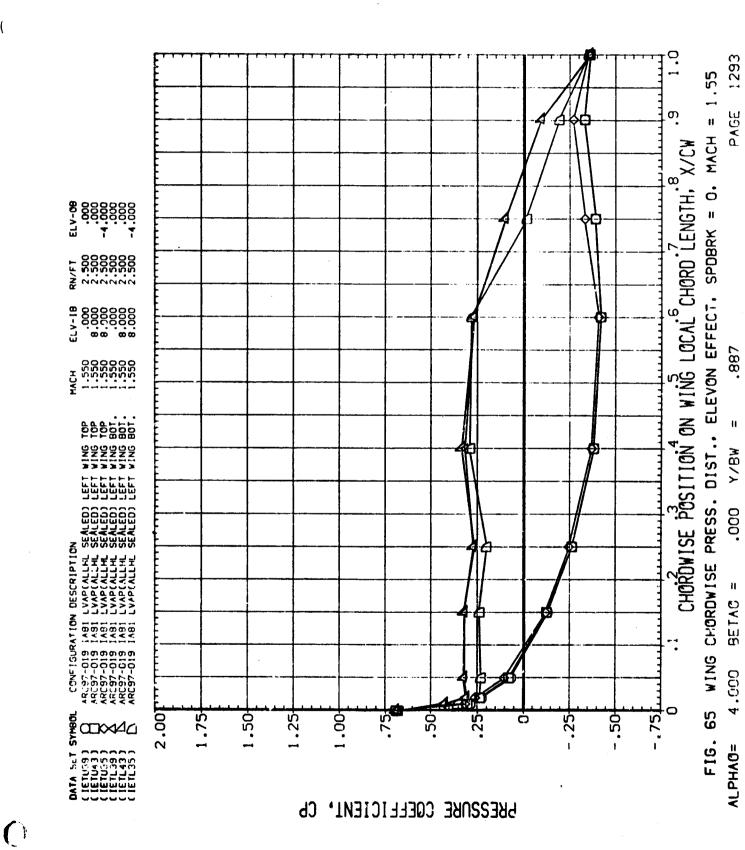
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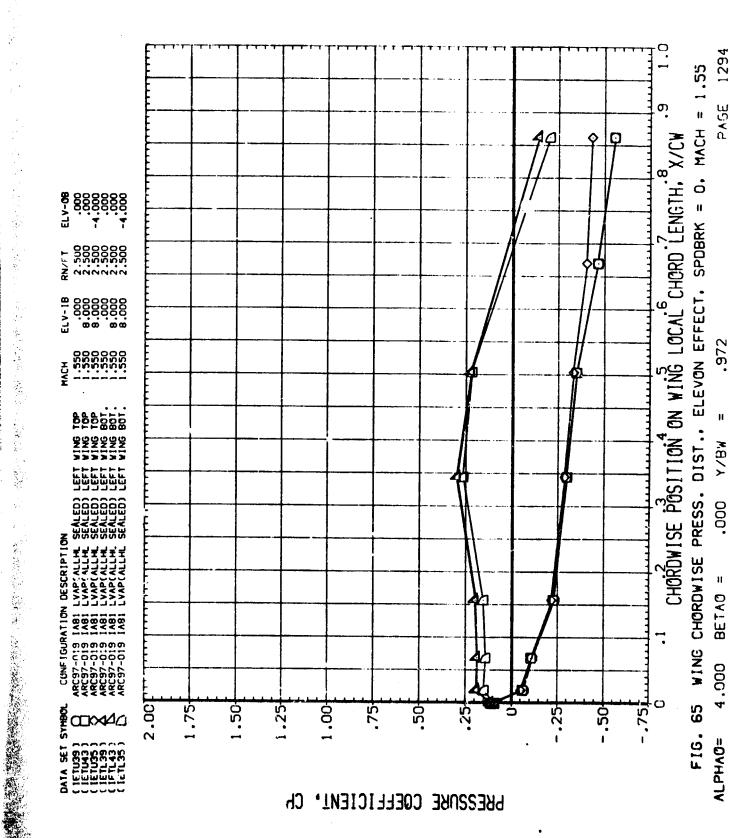
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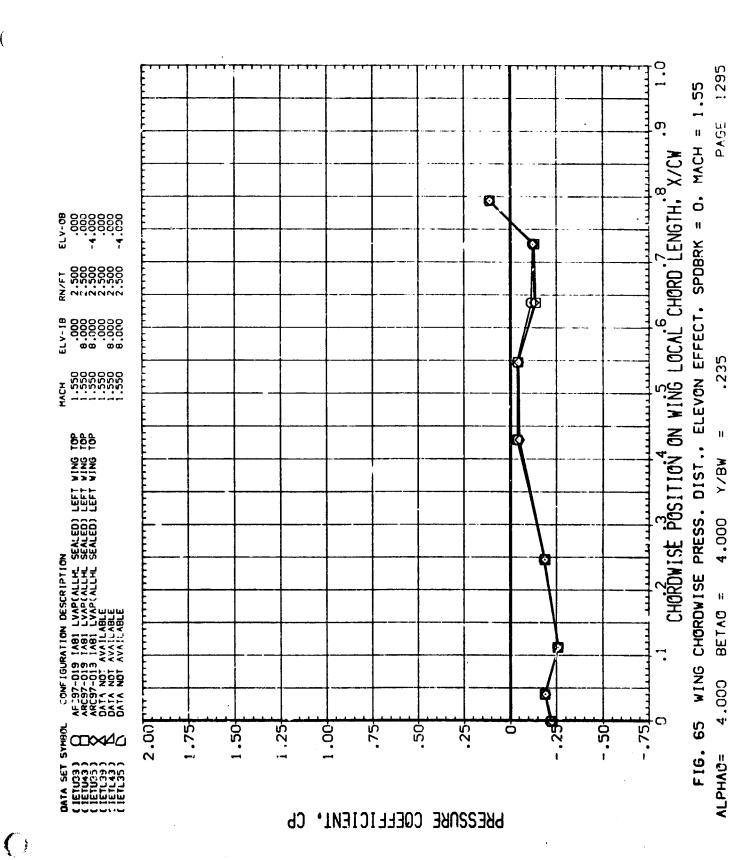
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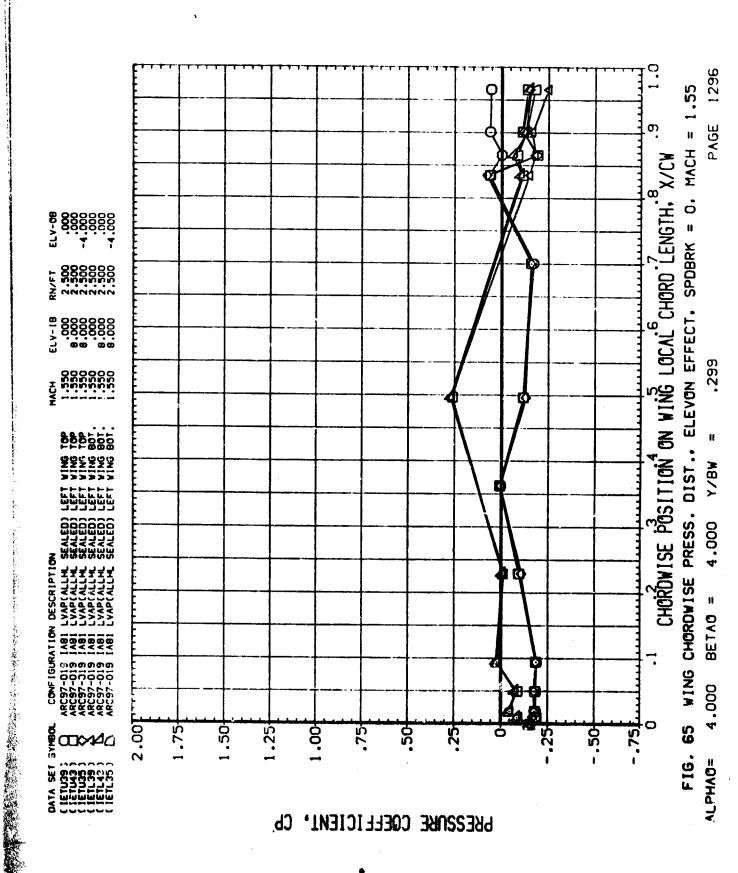
PRESSURE COEFFICIENT, CP

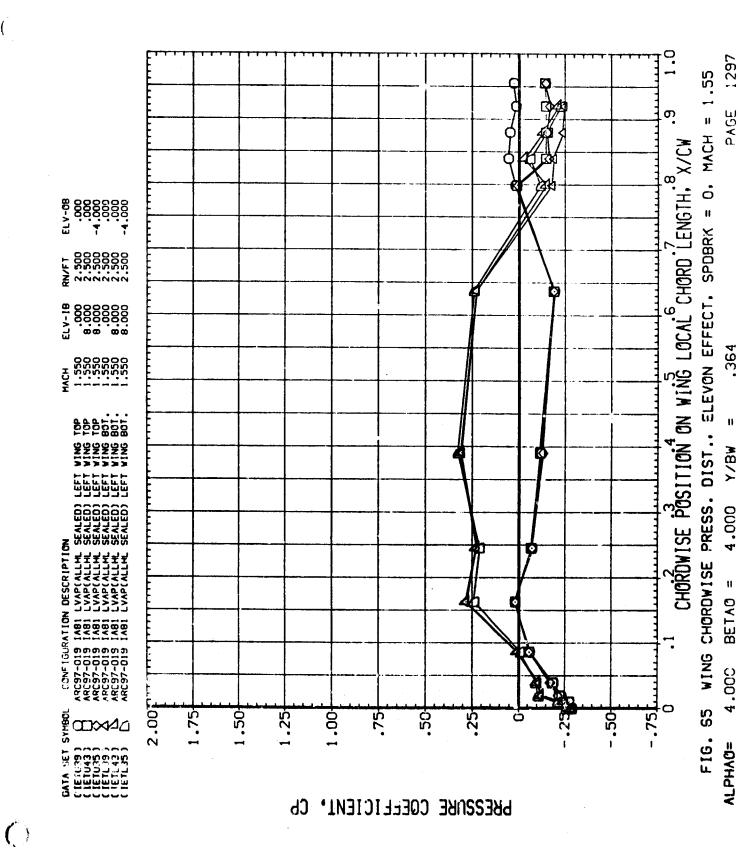


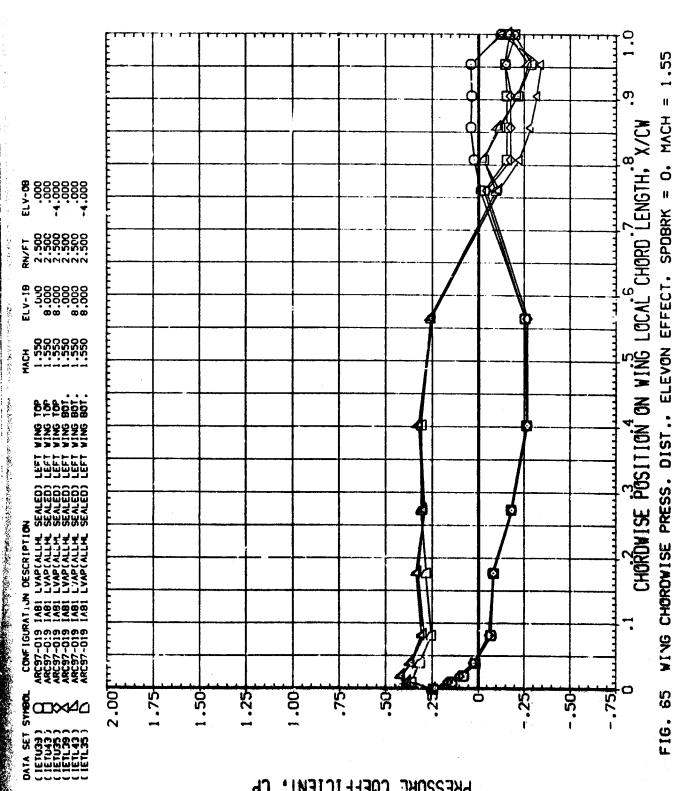












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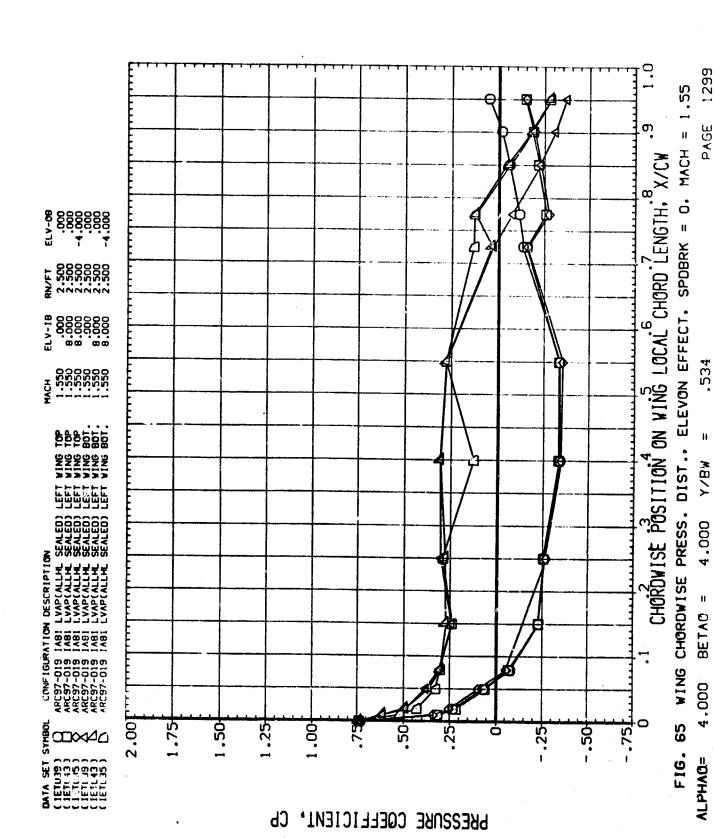
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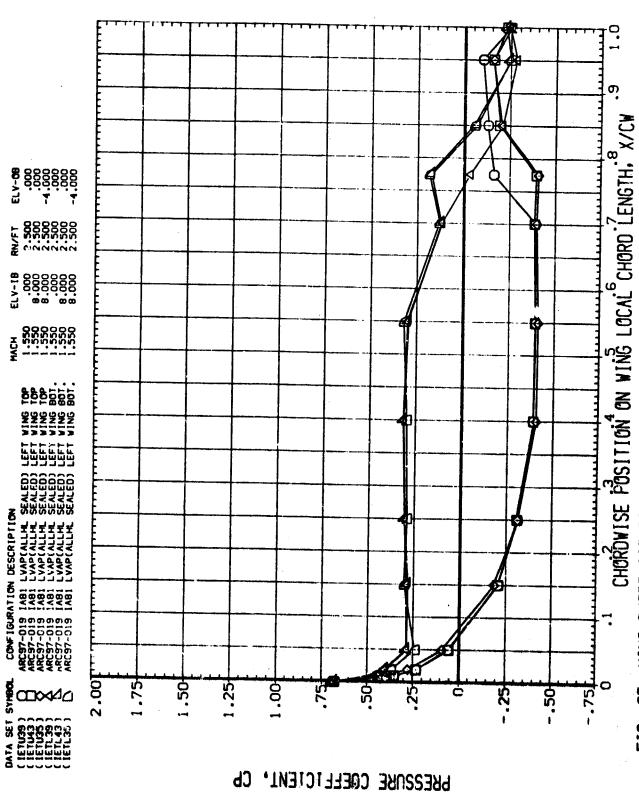
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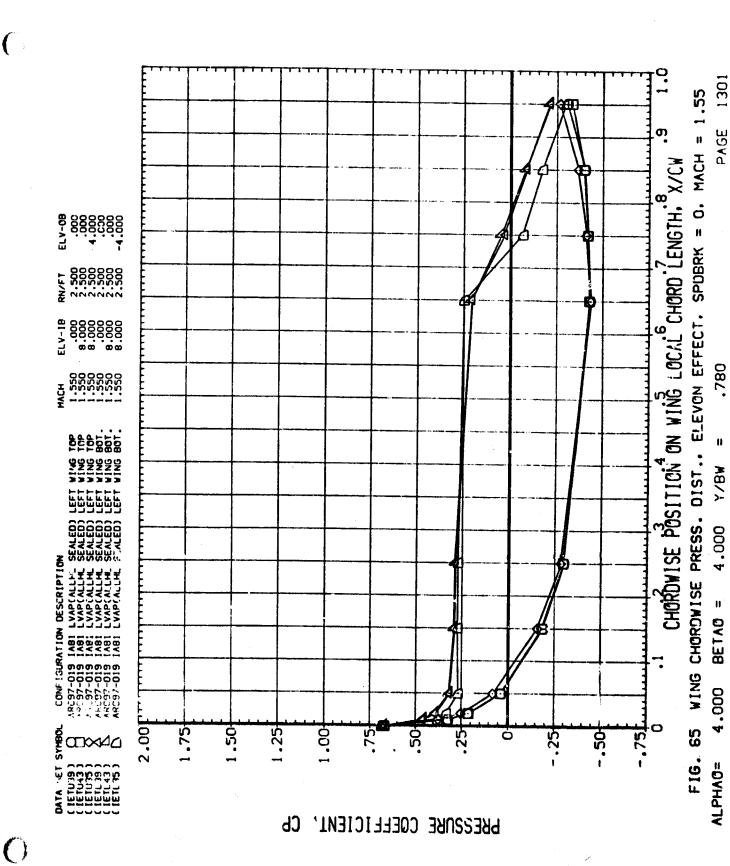


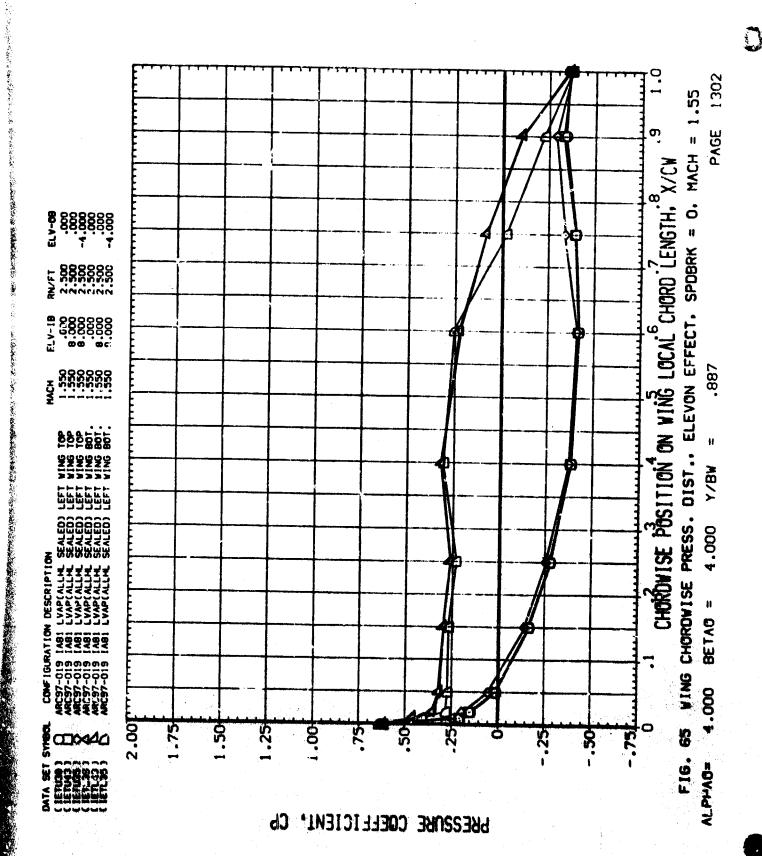


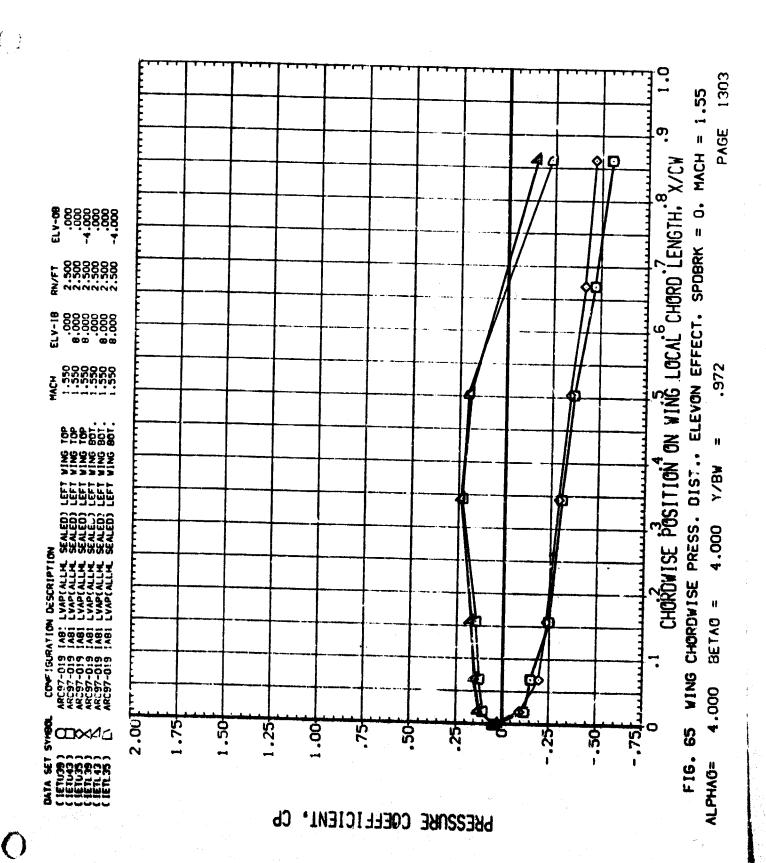
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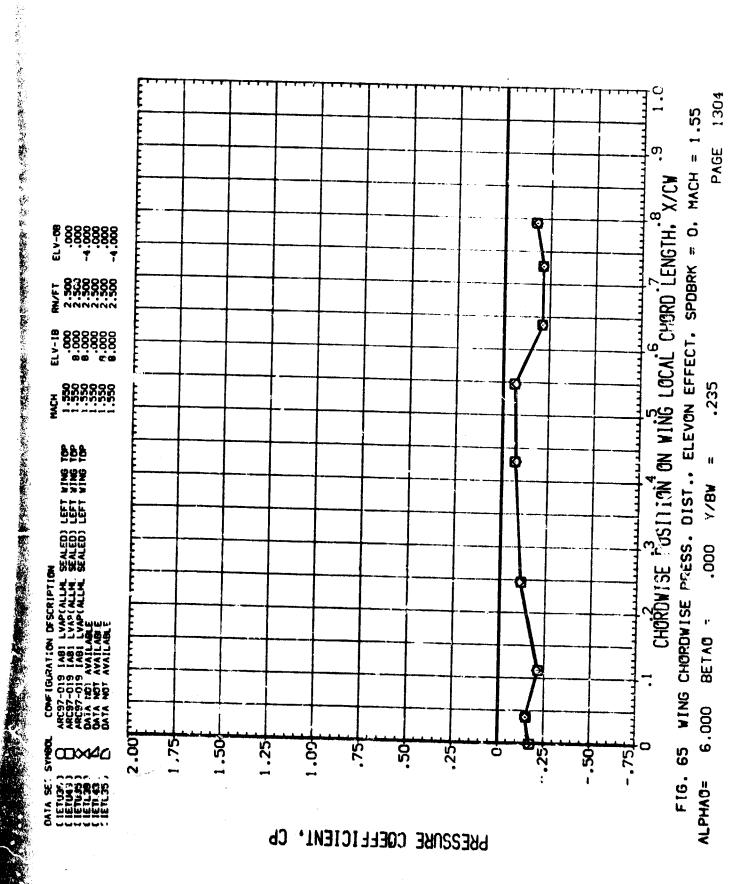
DIST. ELEVON EFFECT, SPDBRK = 0, MACH = 1.55 PAGE .673 Y/BW WING CHORDWISE PRESS. 4.000 BETAO 4.000 F16. 65 ALPHA@=

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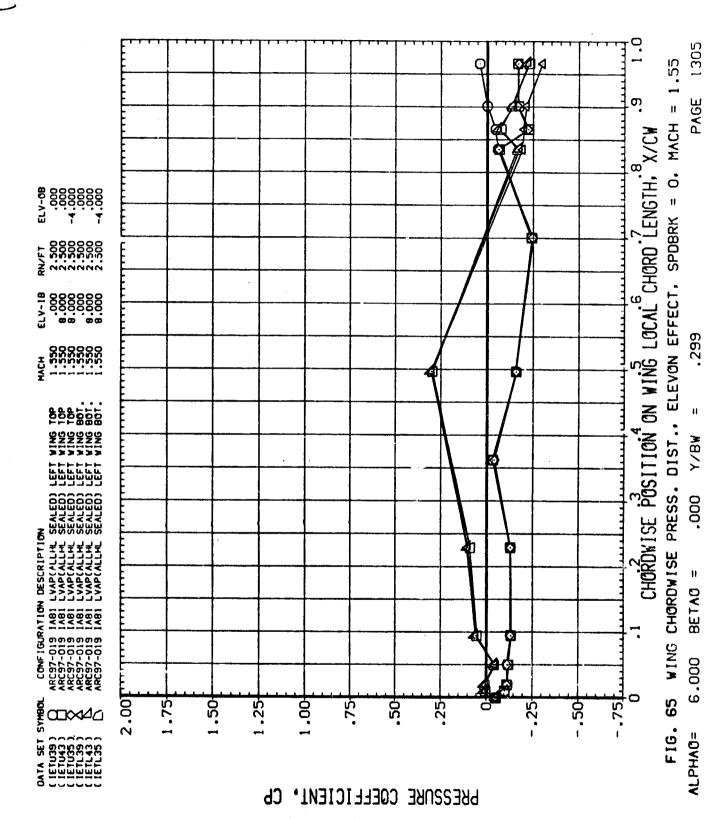


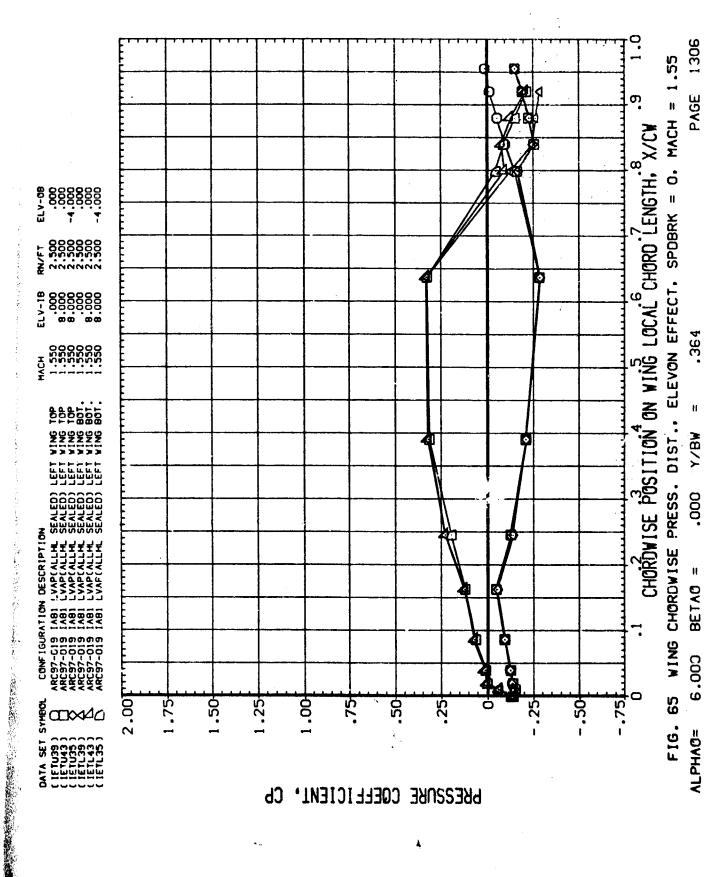


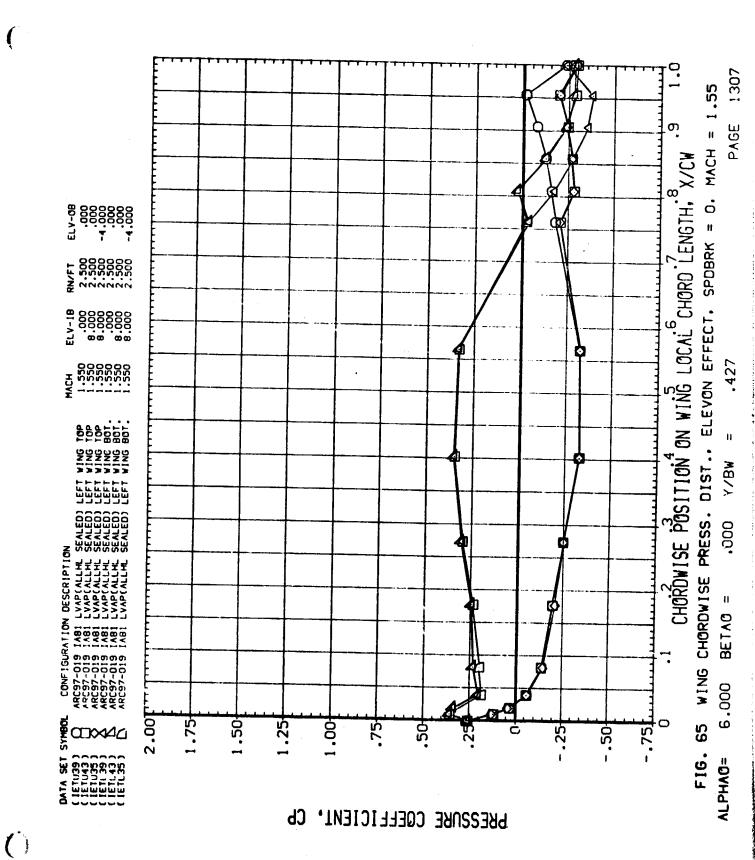


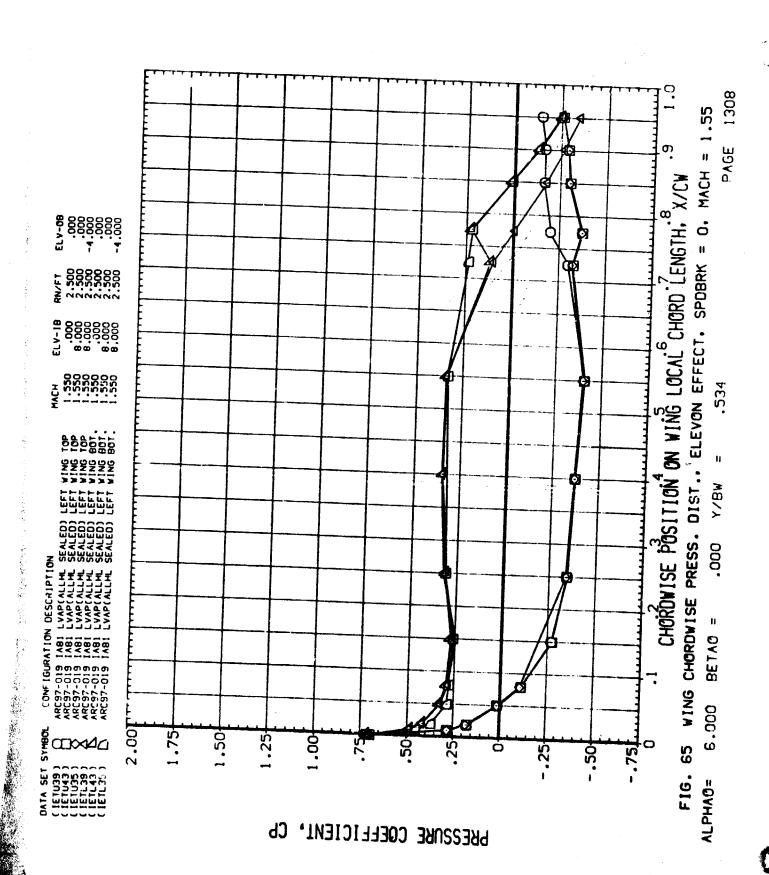


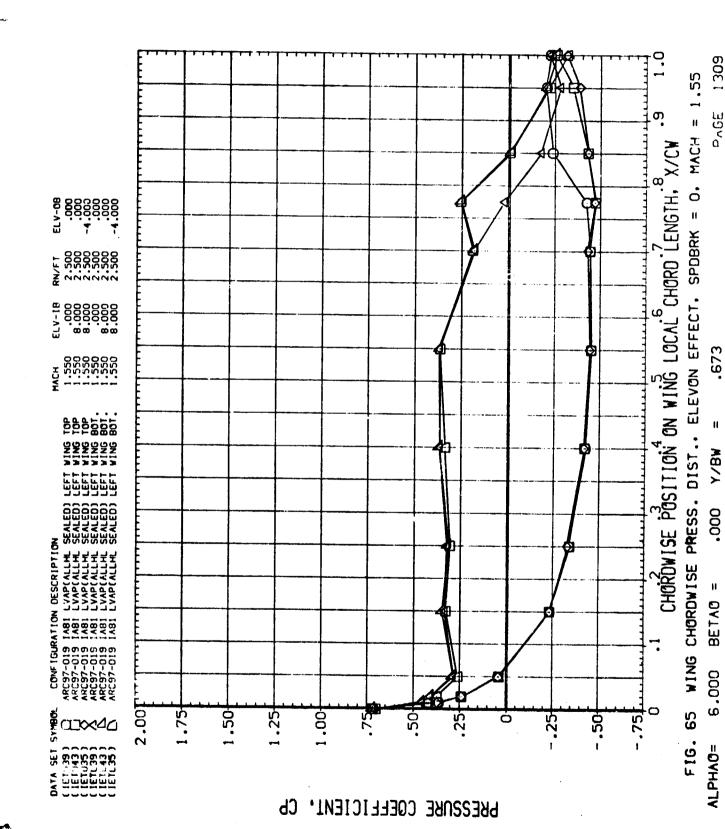
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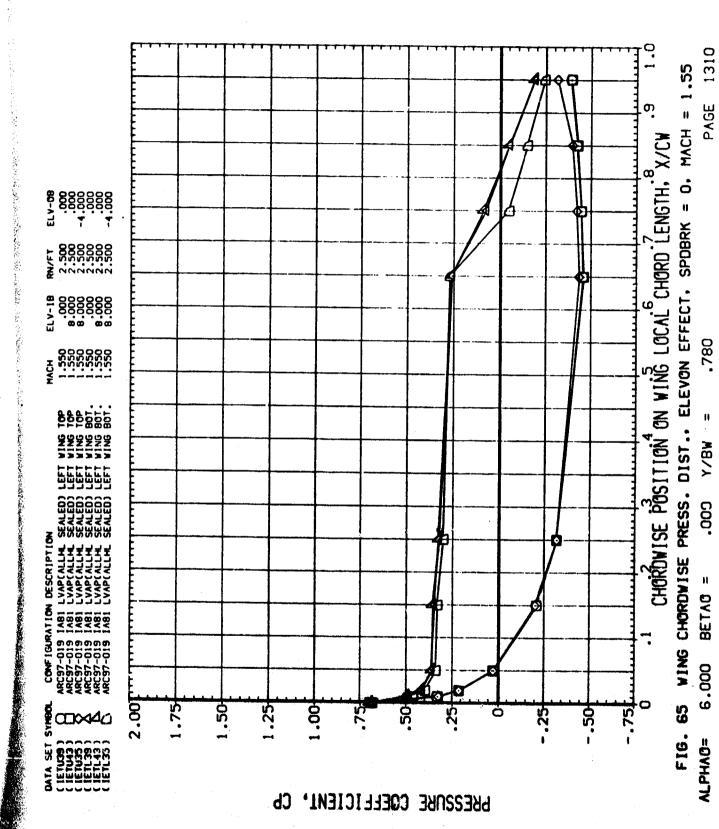


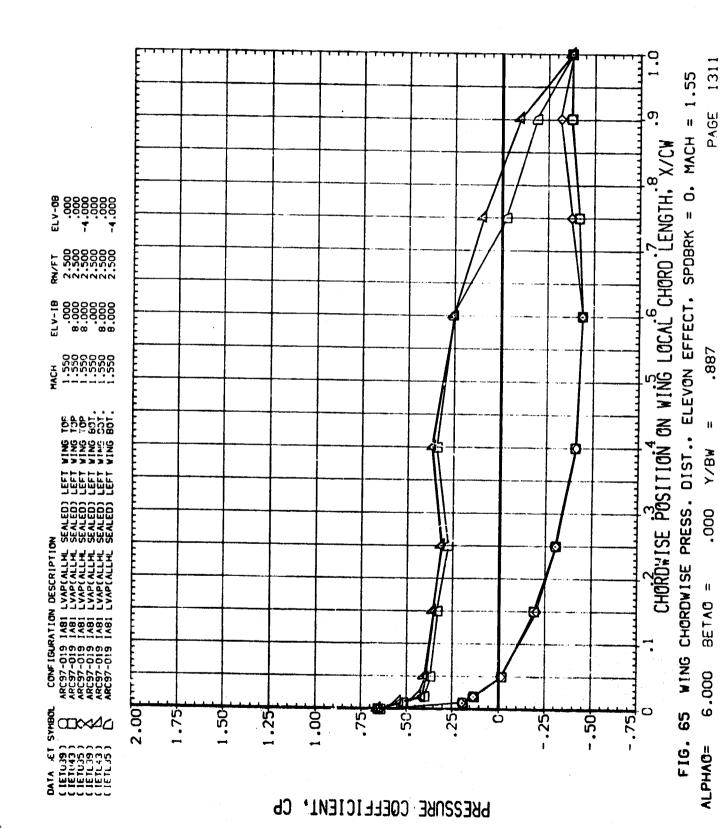


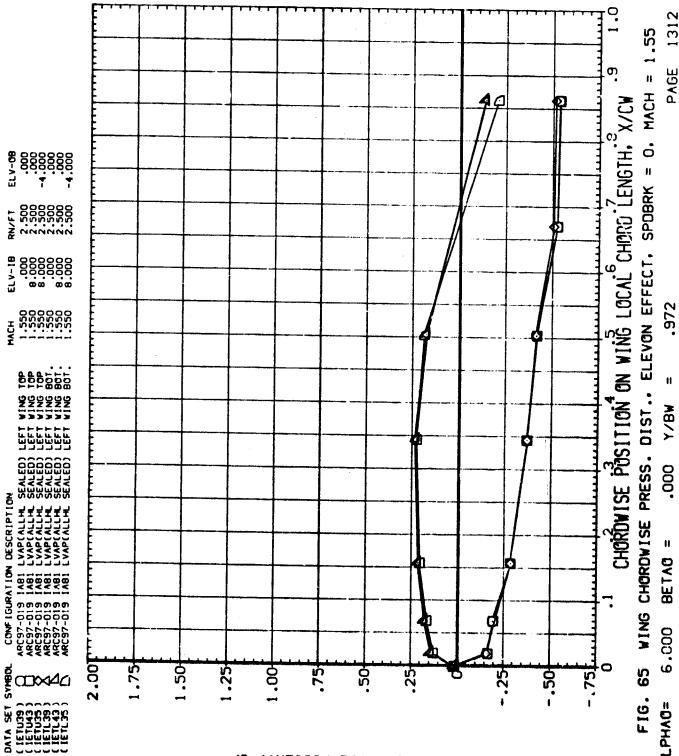




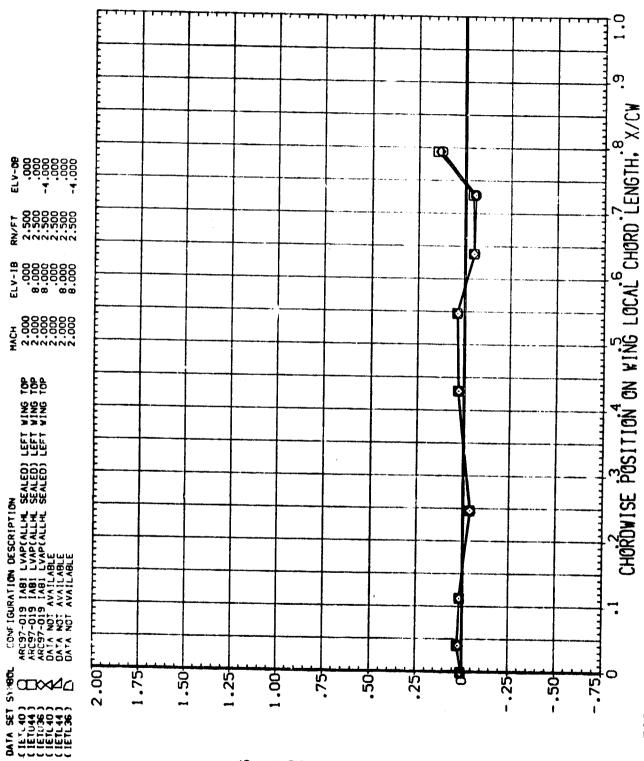






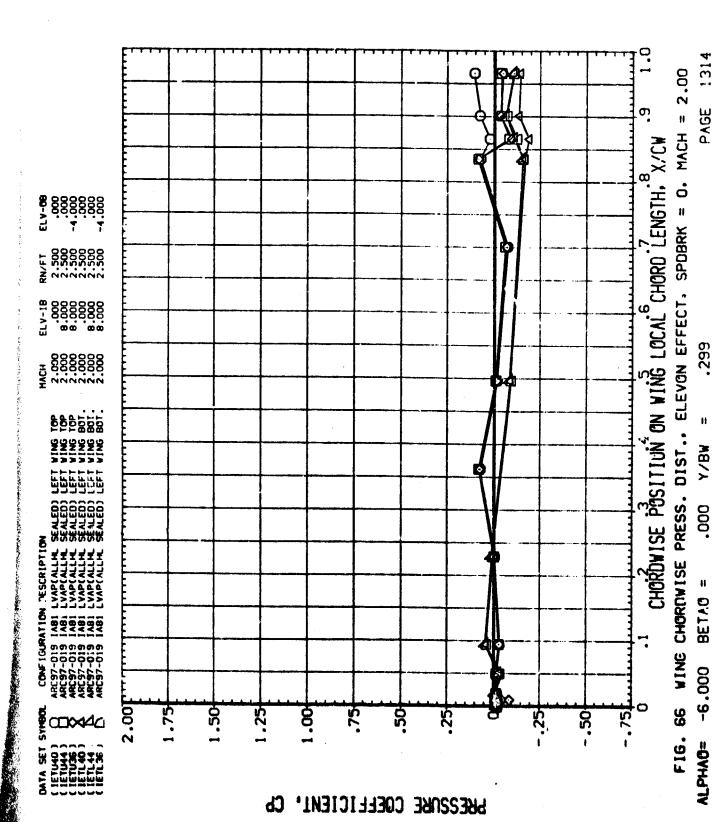


ALPHAG=



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PAGE 1313 WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPDBRK = 0, MACH = 2.00 .235 Y/BW 000 BETAG = -6.000 F16. 66 ALPHAG=



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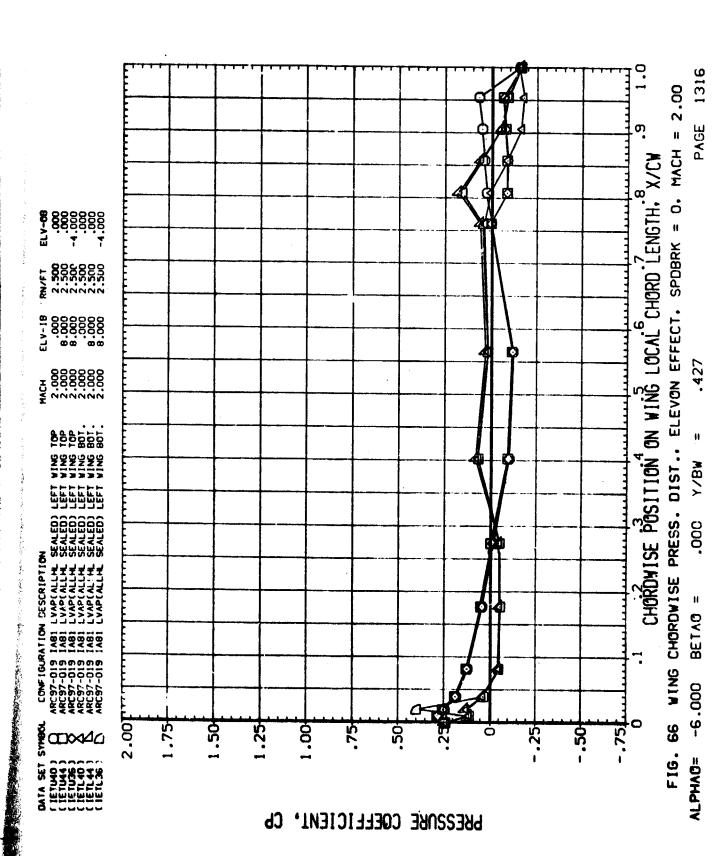
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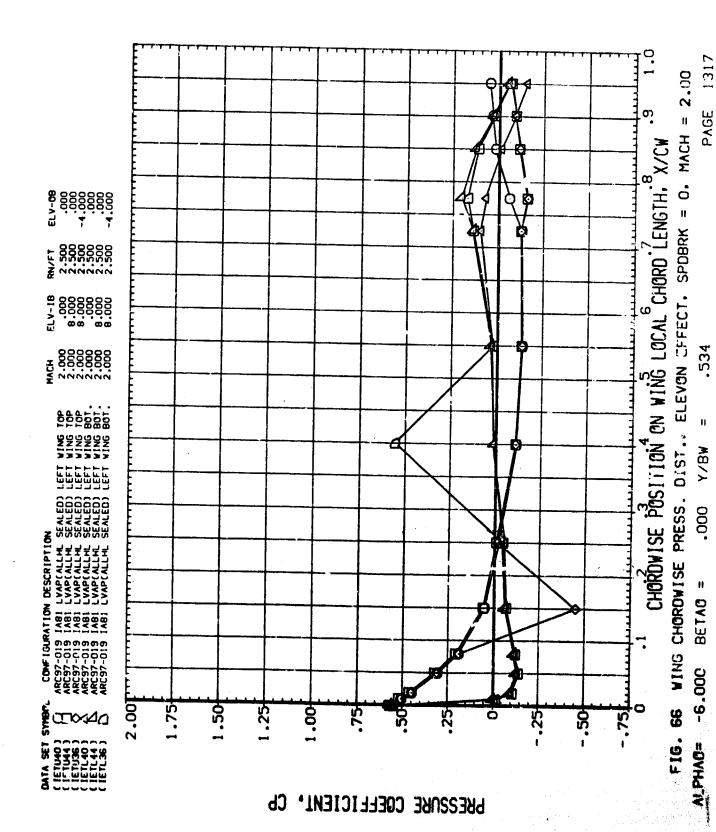
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BETAO

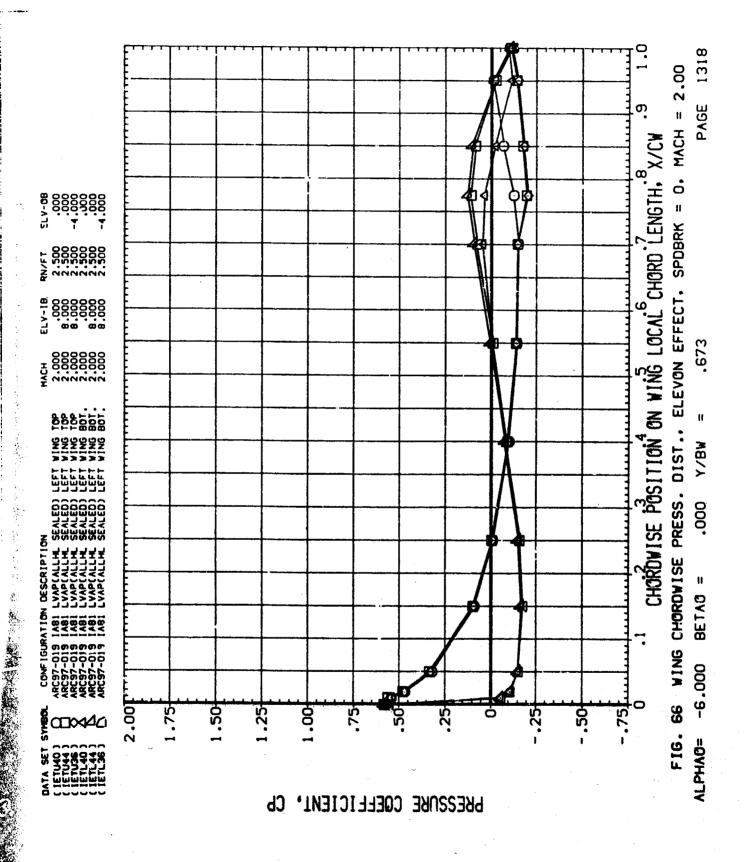
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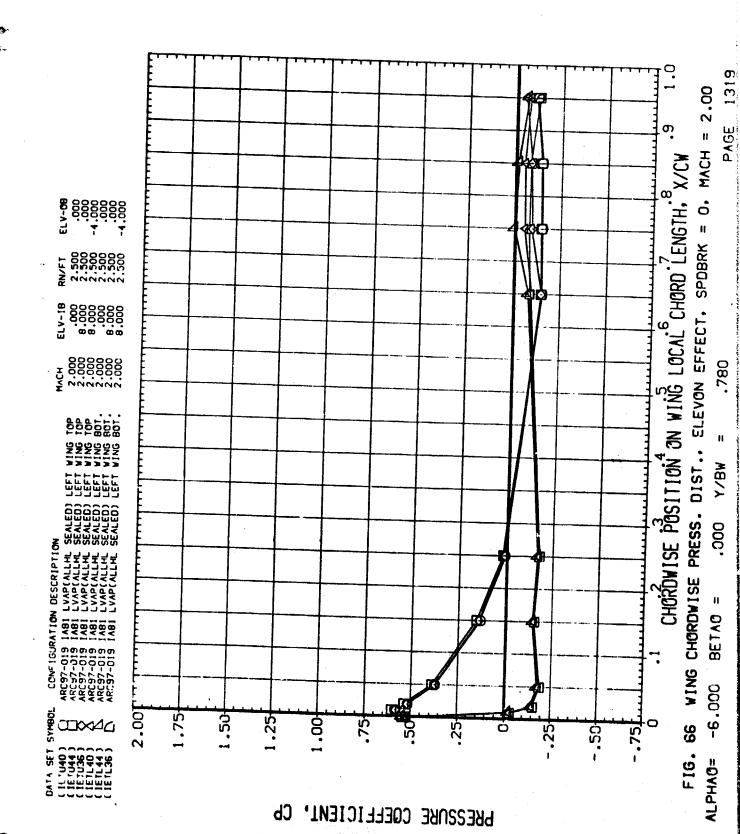
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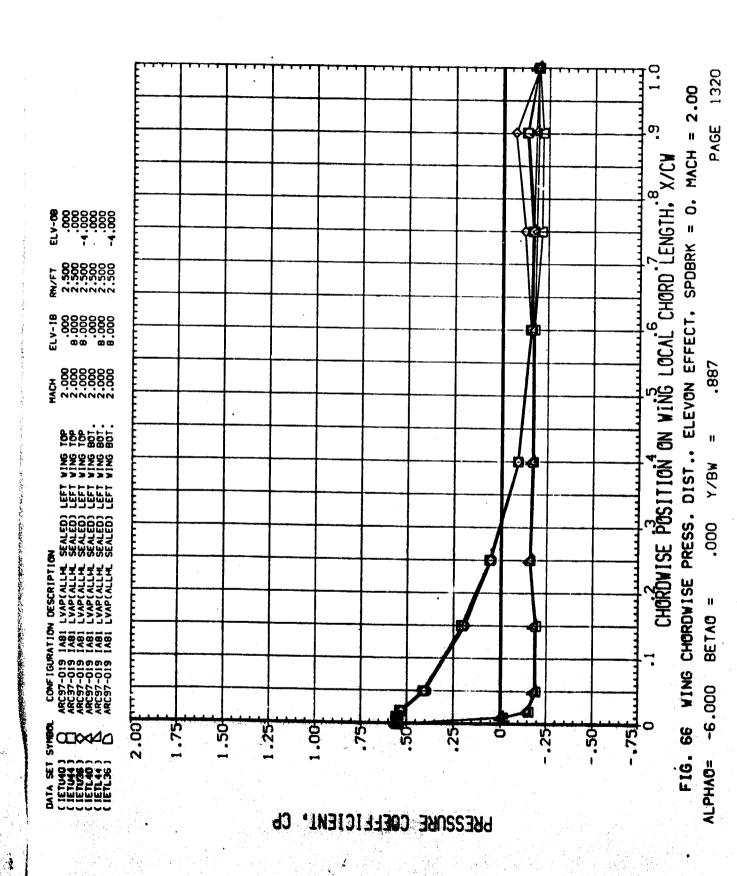


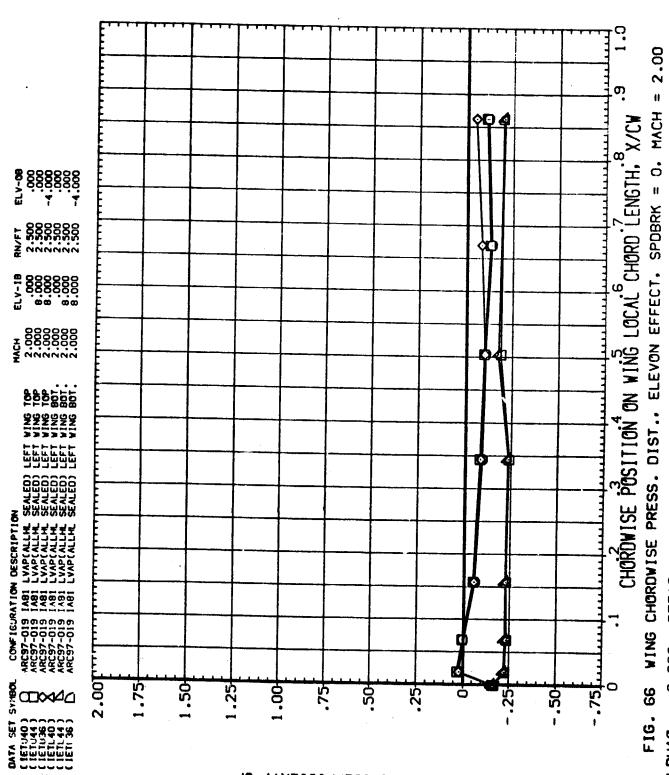
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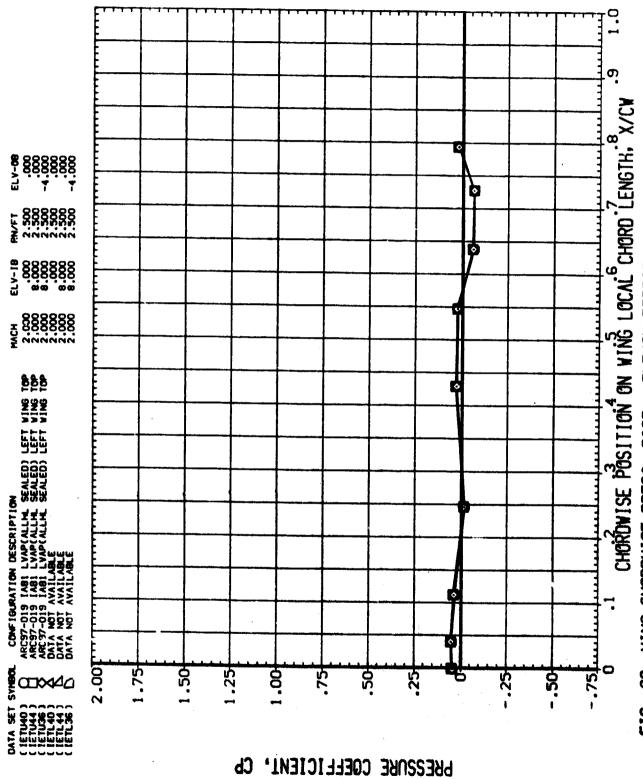
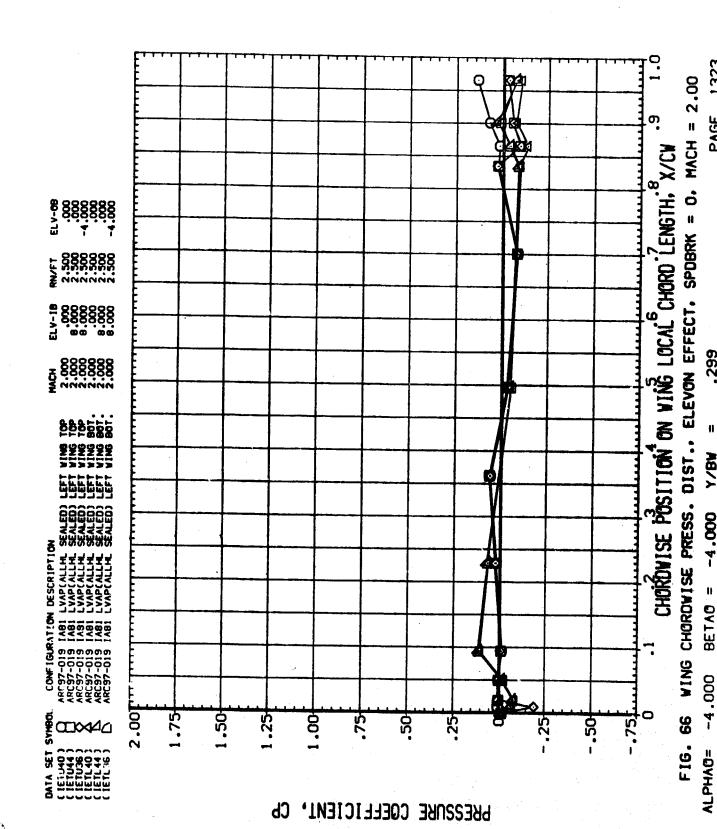


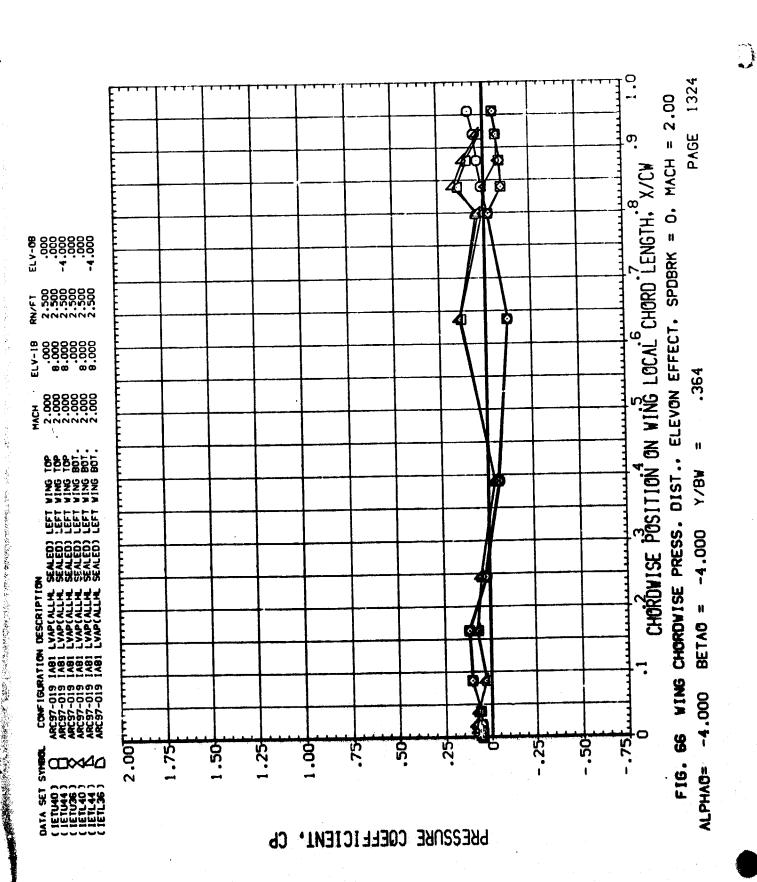
FIG. 66 WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPOBRK = 0. MACH = 2.00 11 Y/BW -4.000 BETAG = -4.000 ALPHAG=

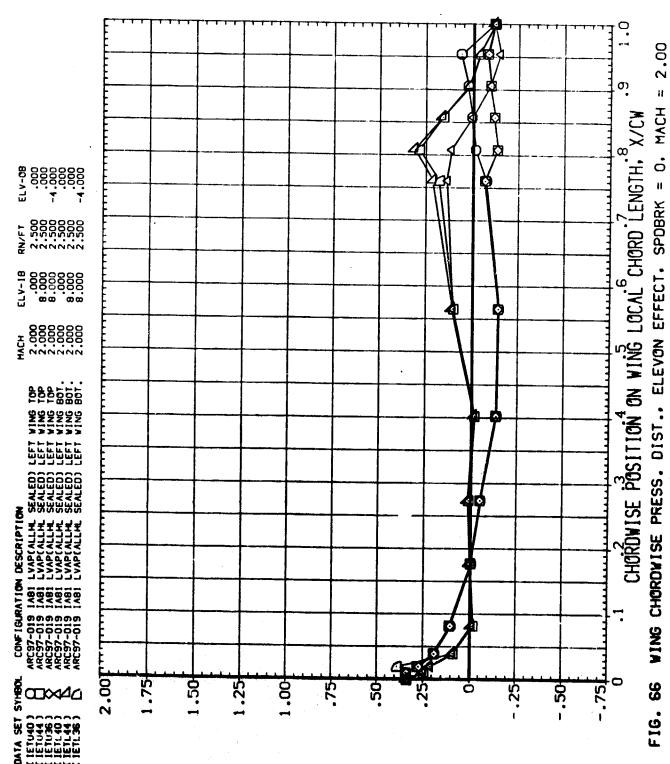
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Y/BW

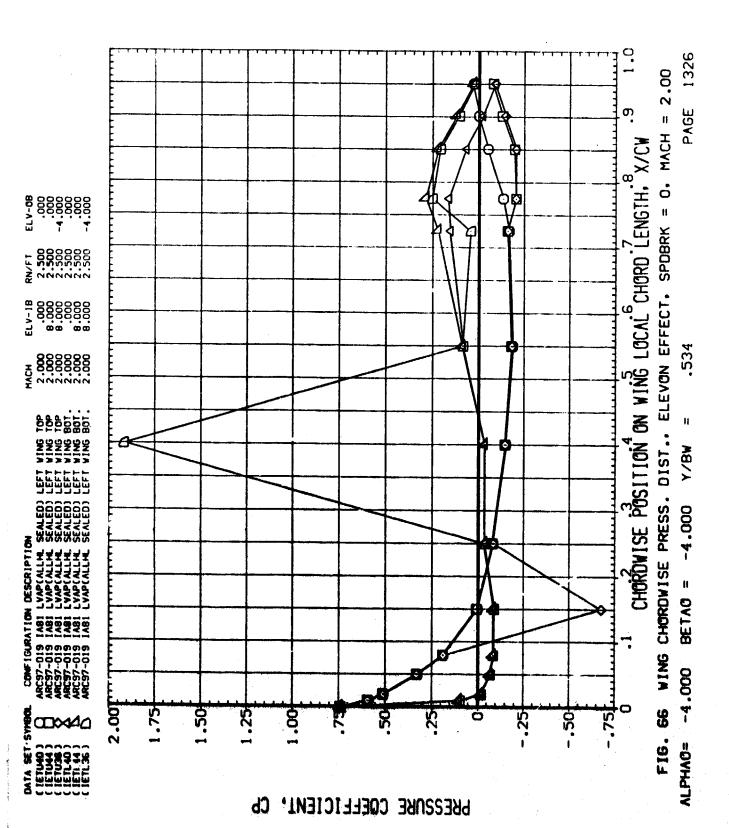
-4.000





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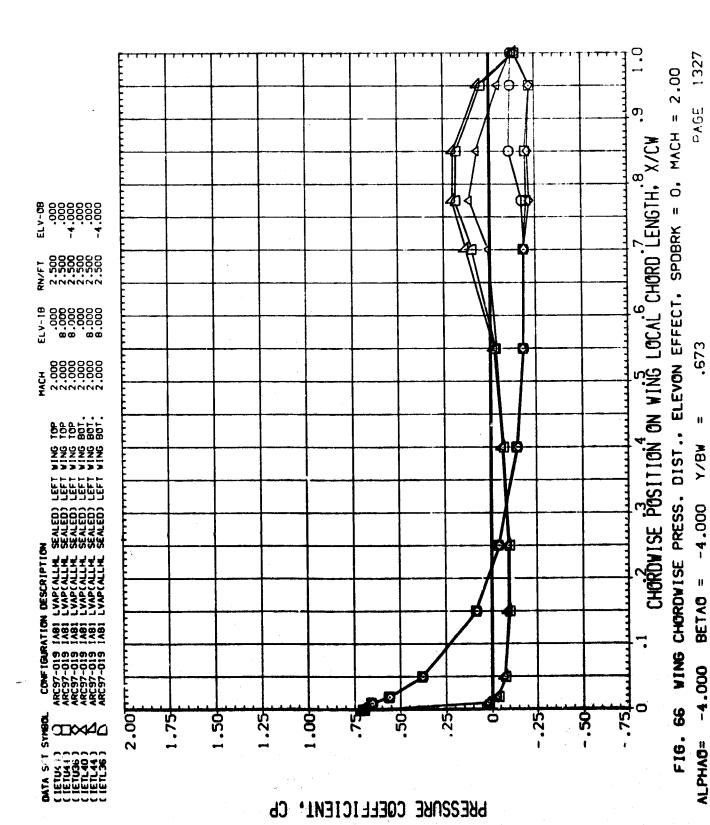


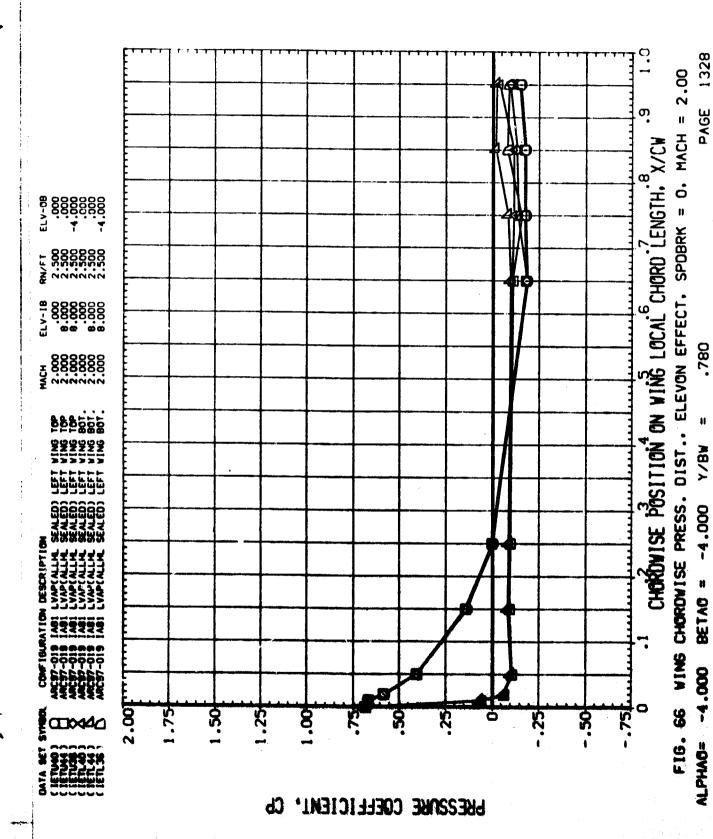
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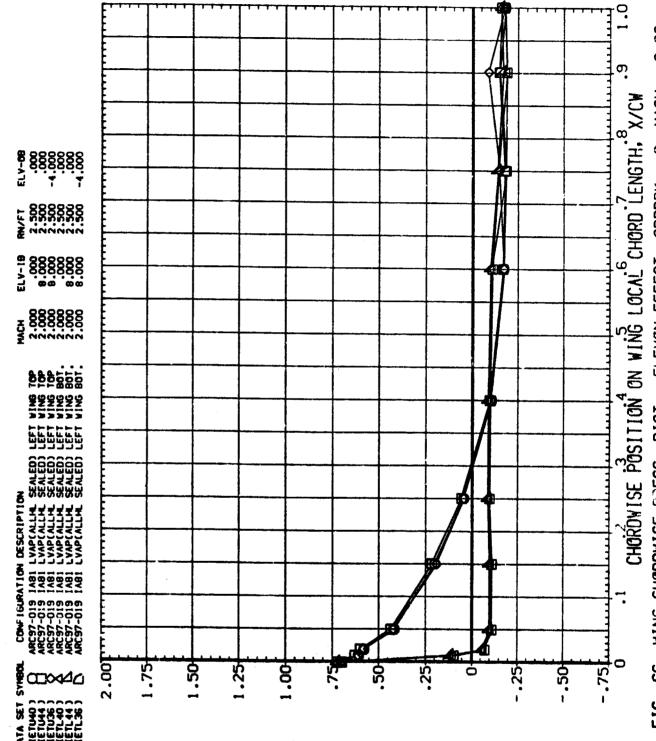
BEIAU = -4.000 Y/BW

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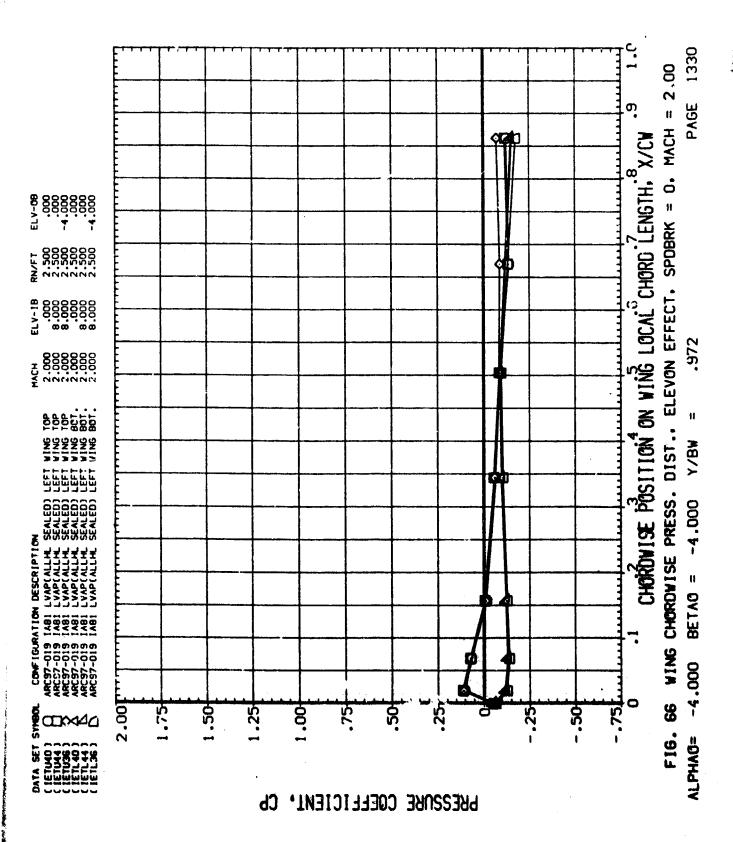
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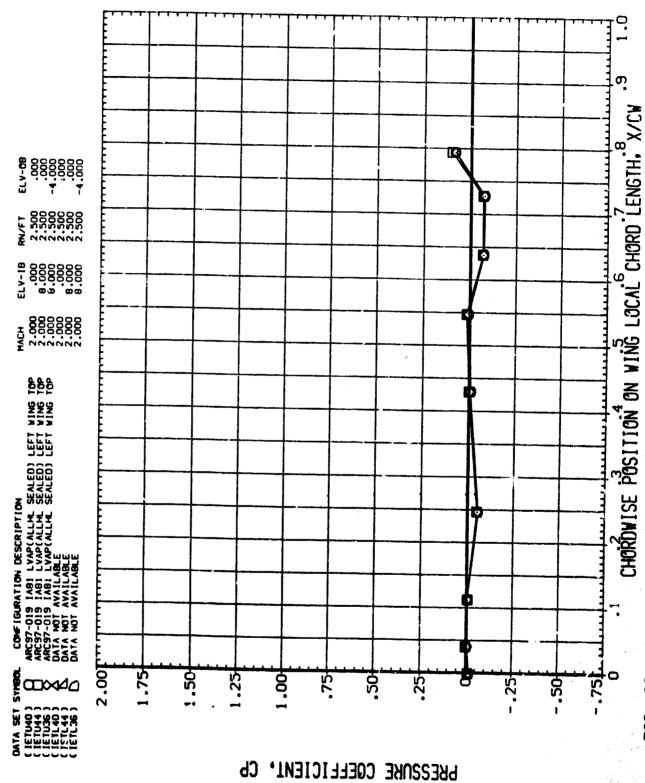






PAGE 1329 WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPOBRK = 0, MACH = 2.00 .887 Y/BW -4.000 BETAO = -4.000 FIG. 86 ALPHA0=

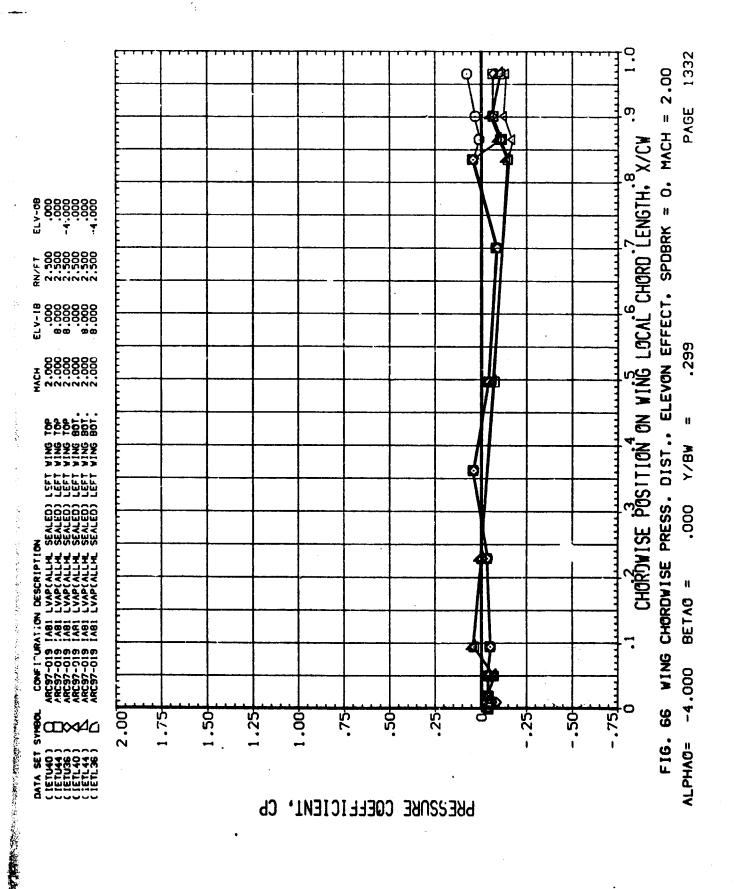


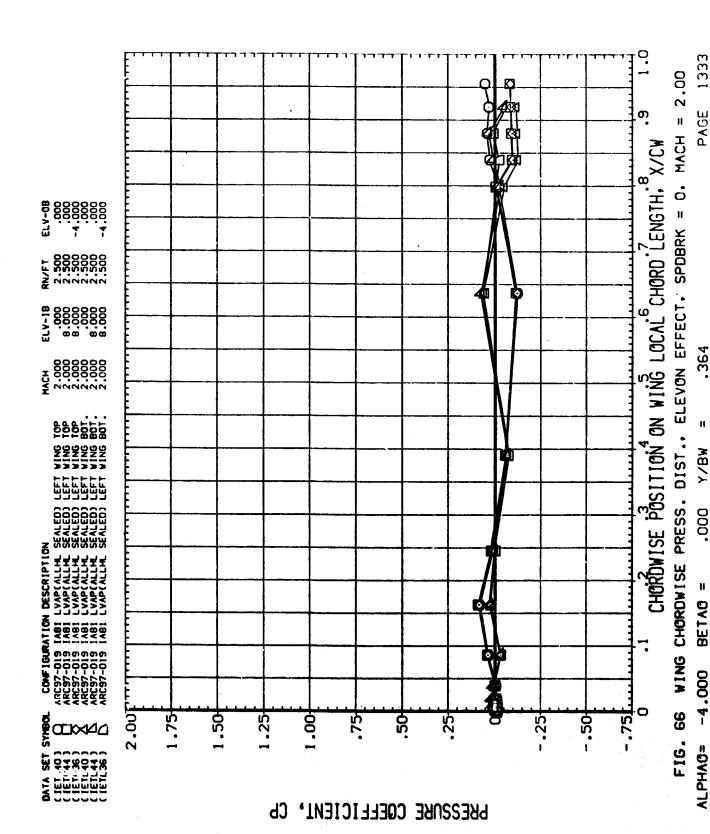


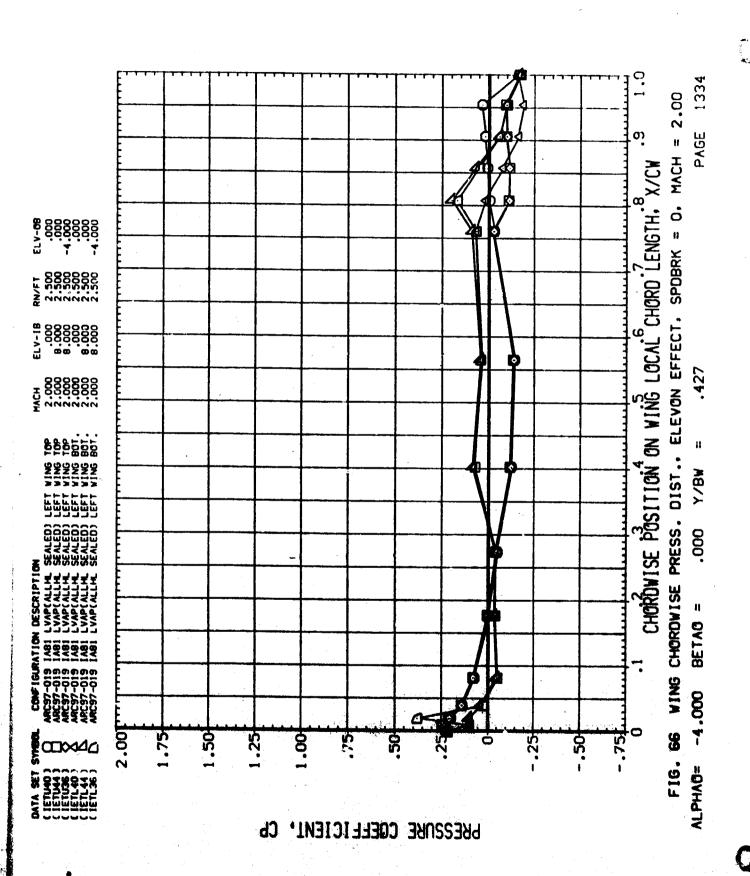
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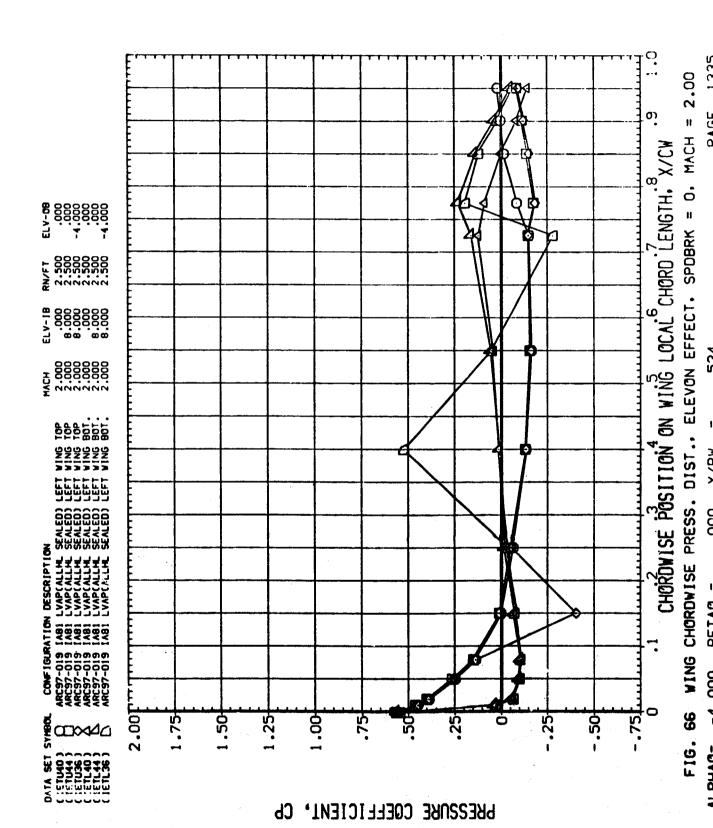
FIG. 66 WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPOBRK = 0. MACH = 2.00 .235 H Y/BW 000 BETAU = -4.000 ALPHA0=

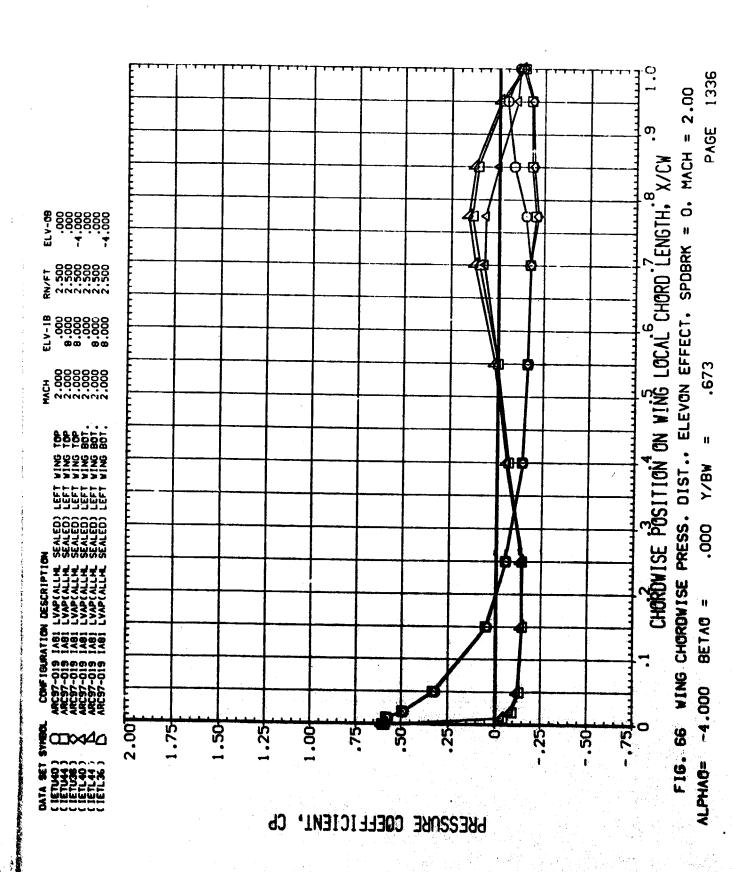
PAGE 1331











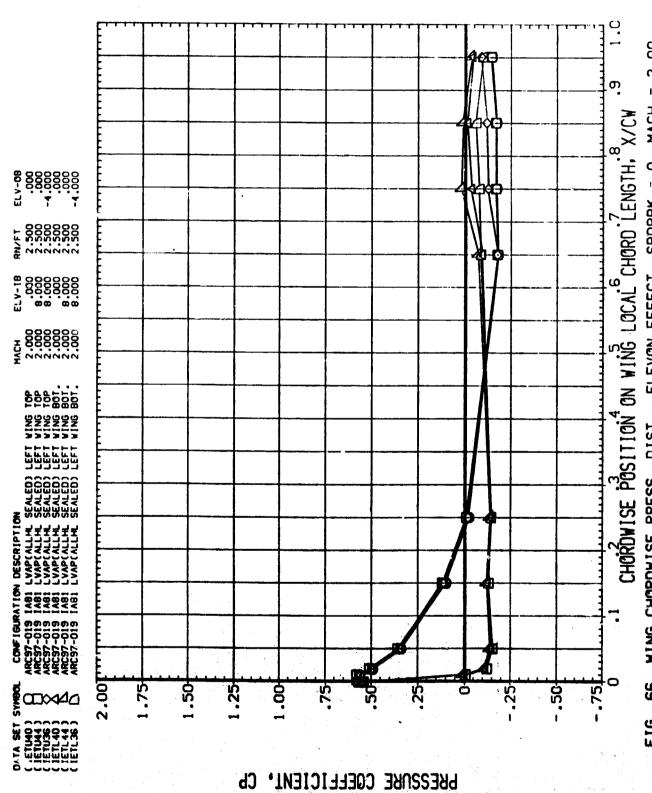
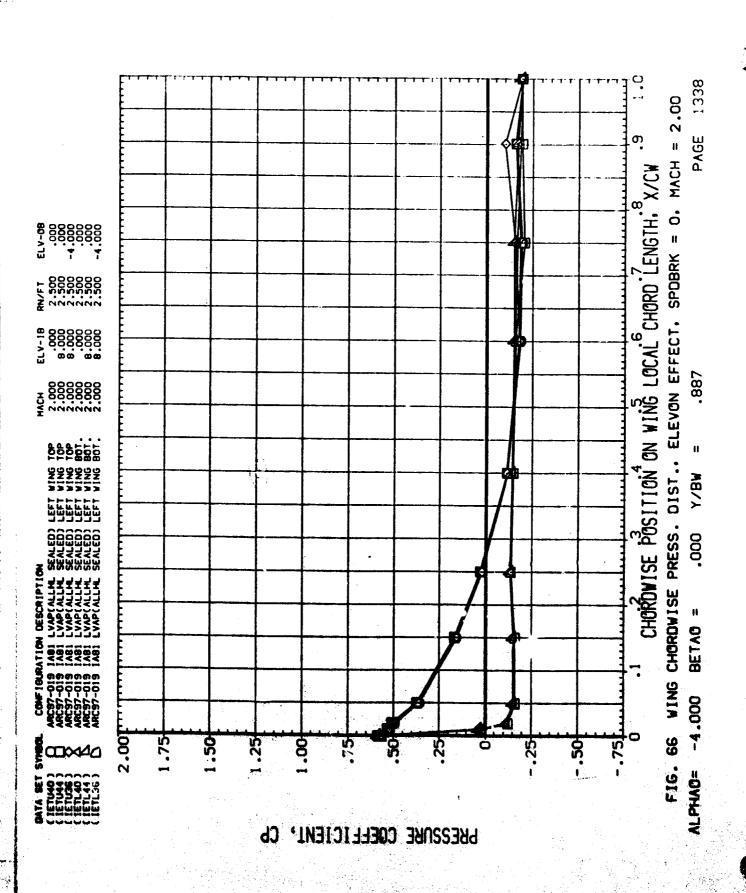
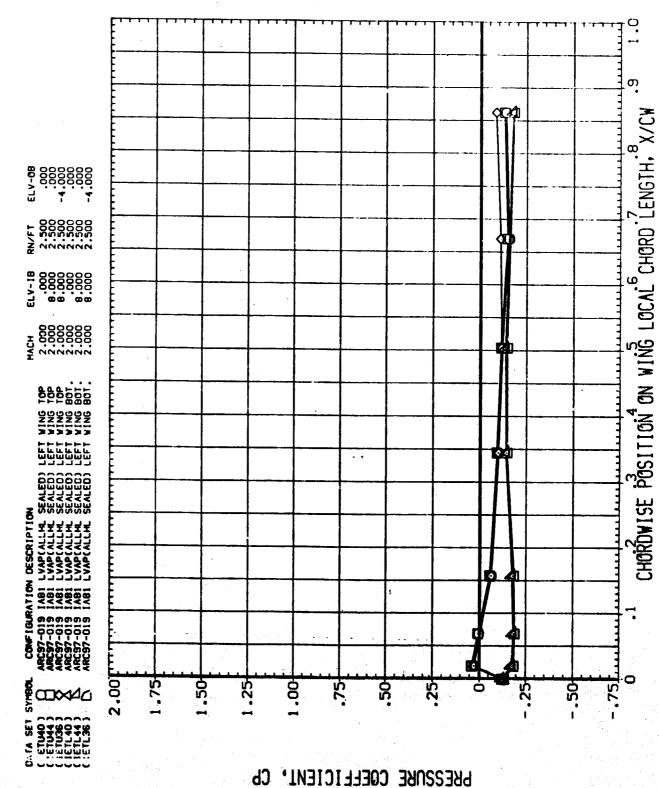


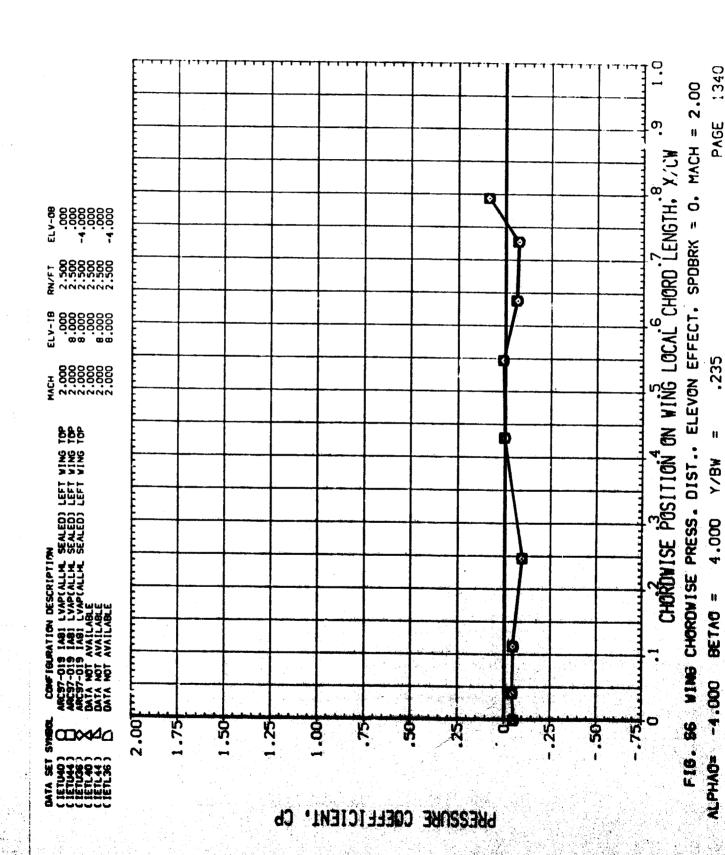
FIG. 66 WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPDBRK = 0, MACH = 2.00 .780 .000 Y/BW BETAO = ALPHA0= -4.000

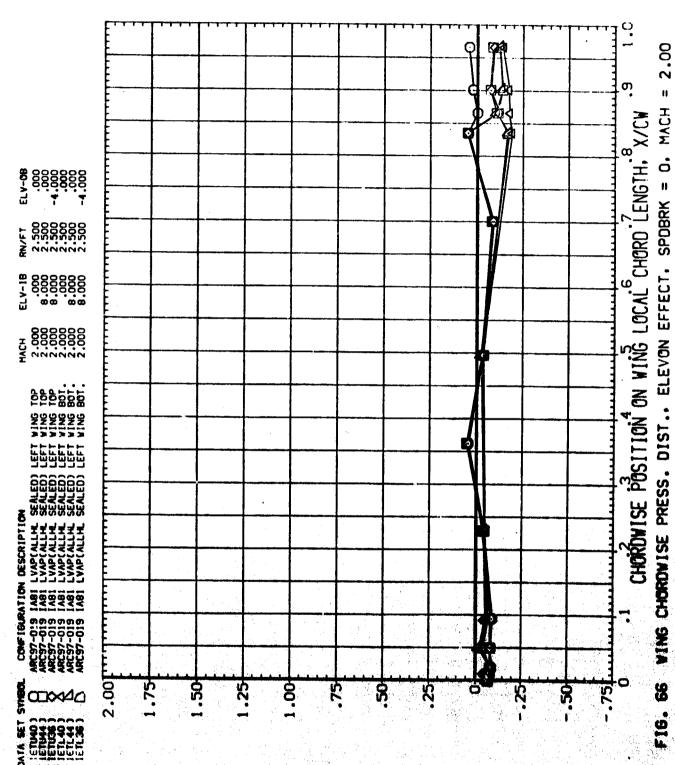




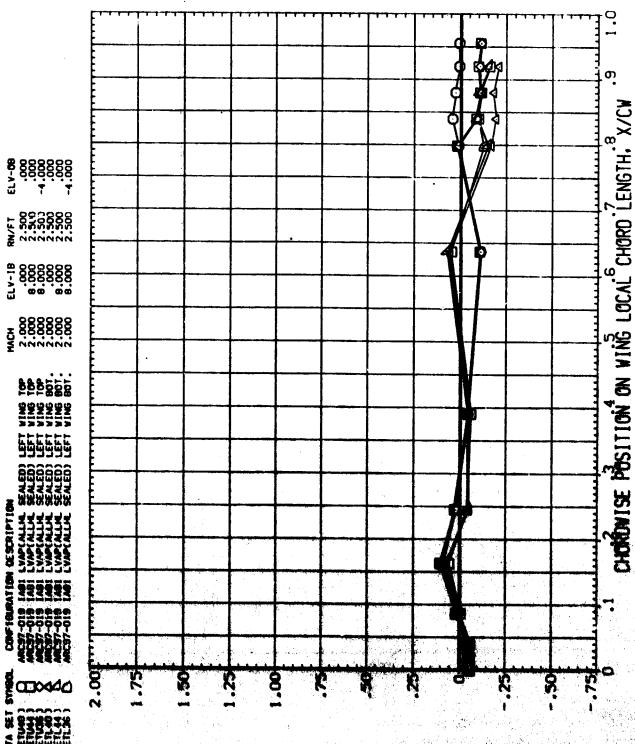
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PAGE 1339 FIG. 66 WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPOBRK = 0, MACH = 2.00 .972 Y/BW 000. BETAC = -4.000 ALPHA0=



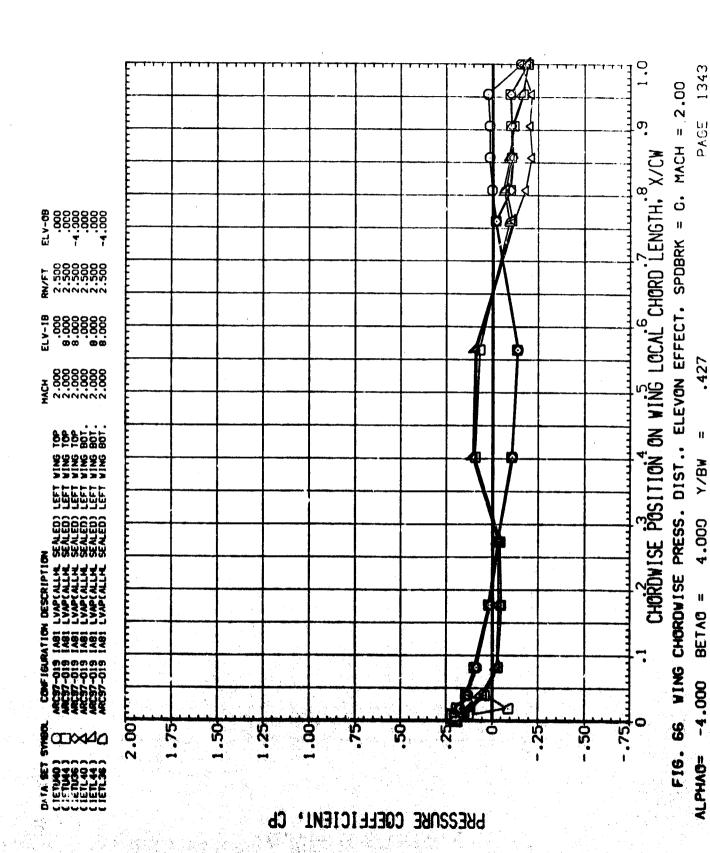


PRESSURE COEFFICIENT, CP

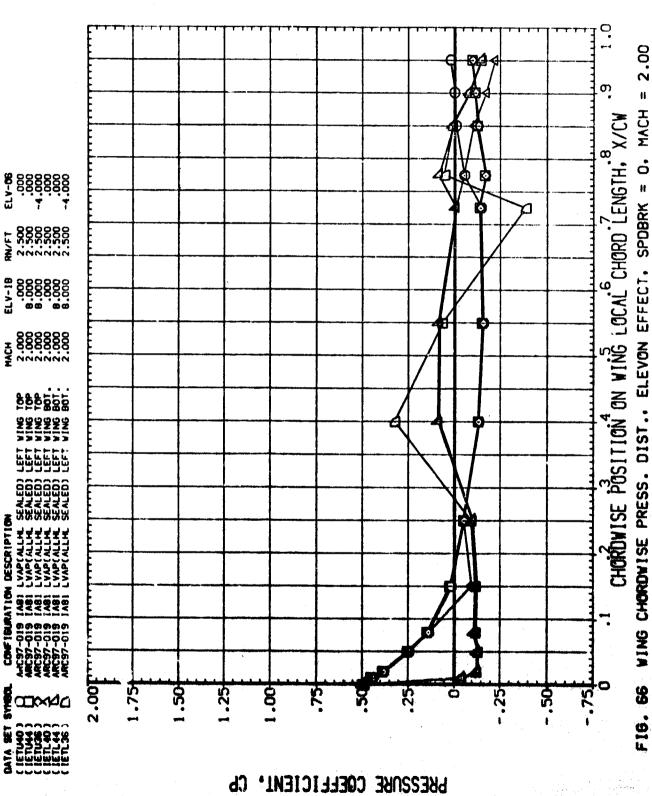


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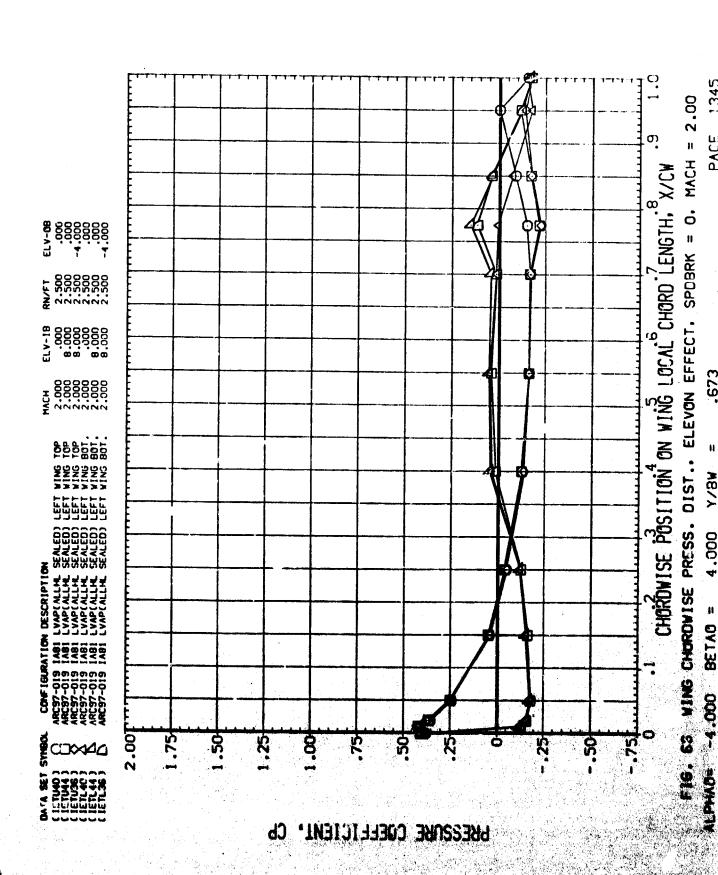
FIS. 66 WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPOBRK = 0. MACH = 2.00 Y/BW 4.000

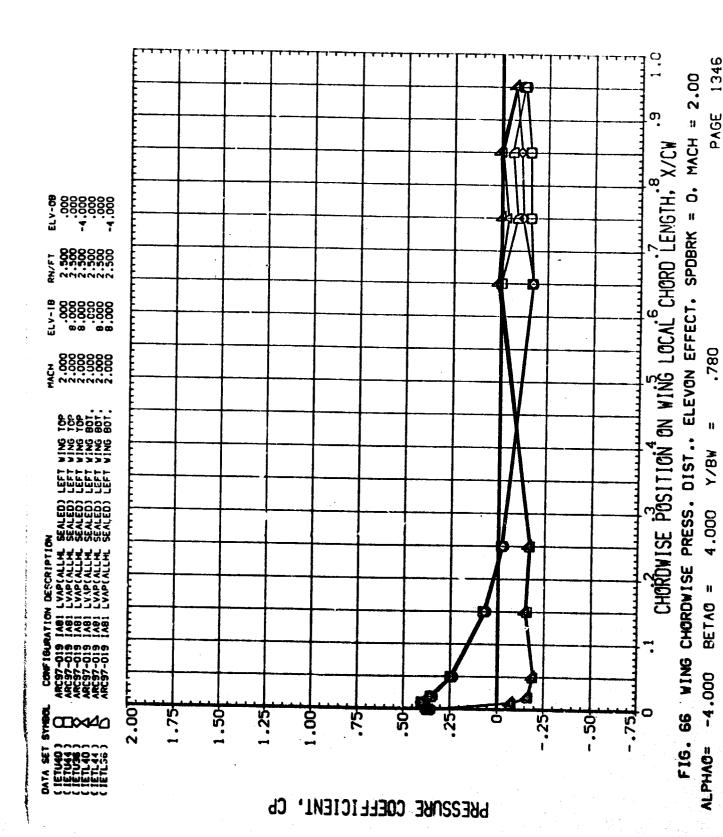


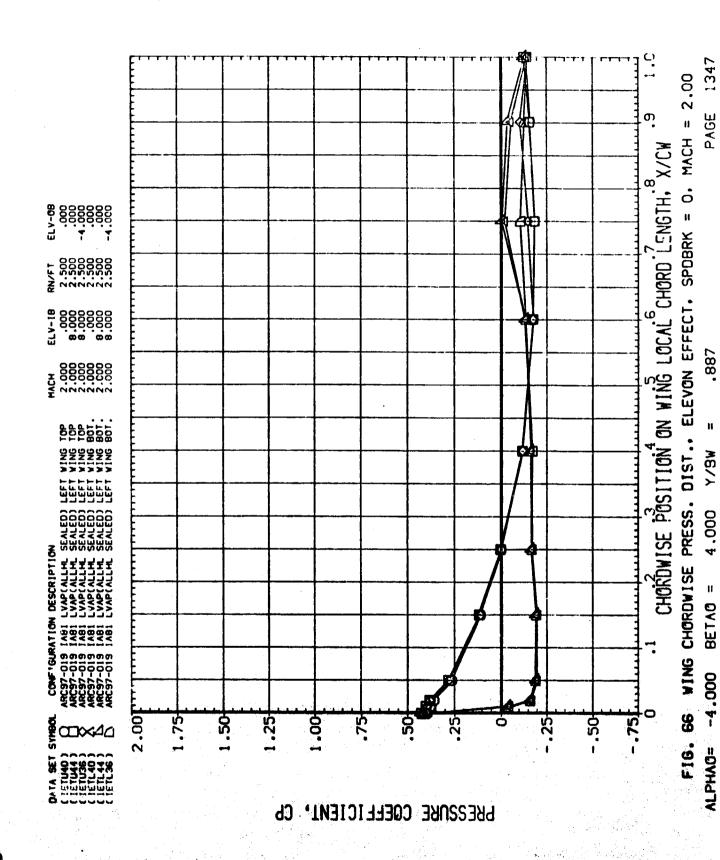
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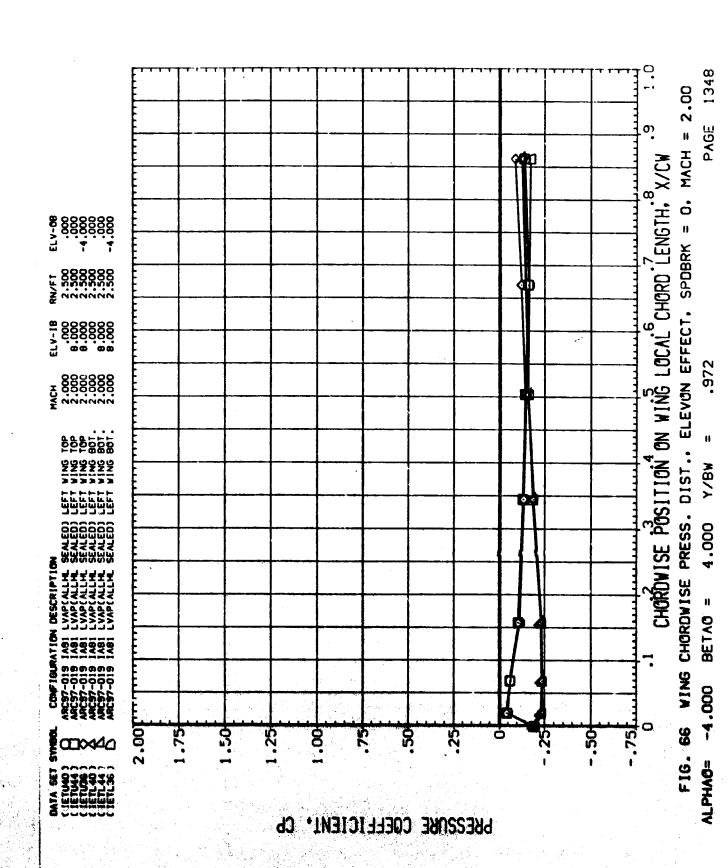


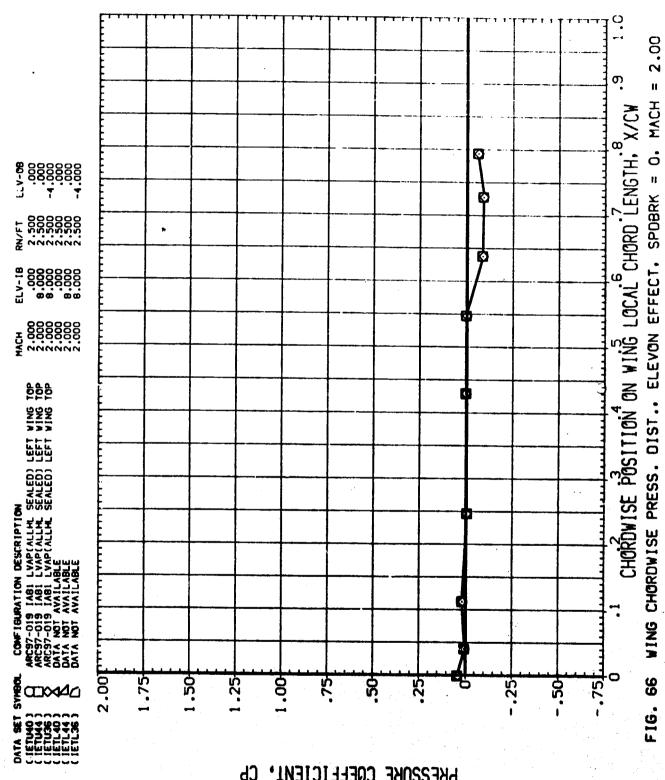
PAGE 1344 .534 Y/BW 4.000 BETAM = -4.000 ALPHA0=











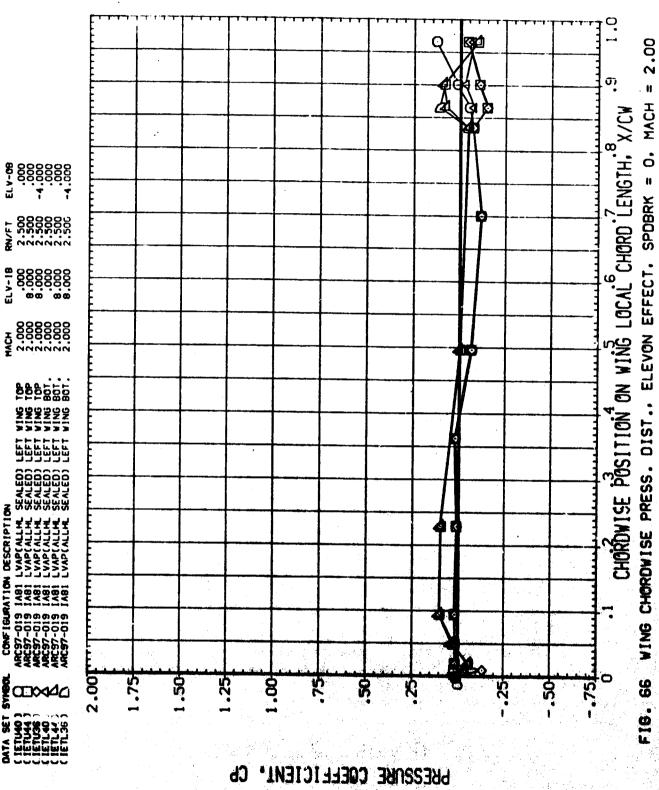
PAGE 1349

BETA0 = -6.000 Y/BW

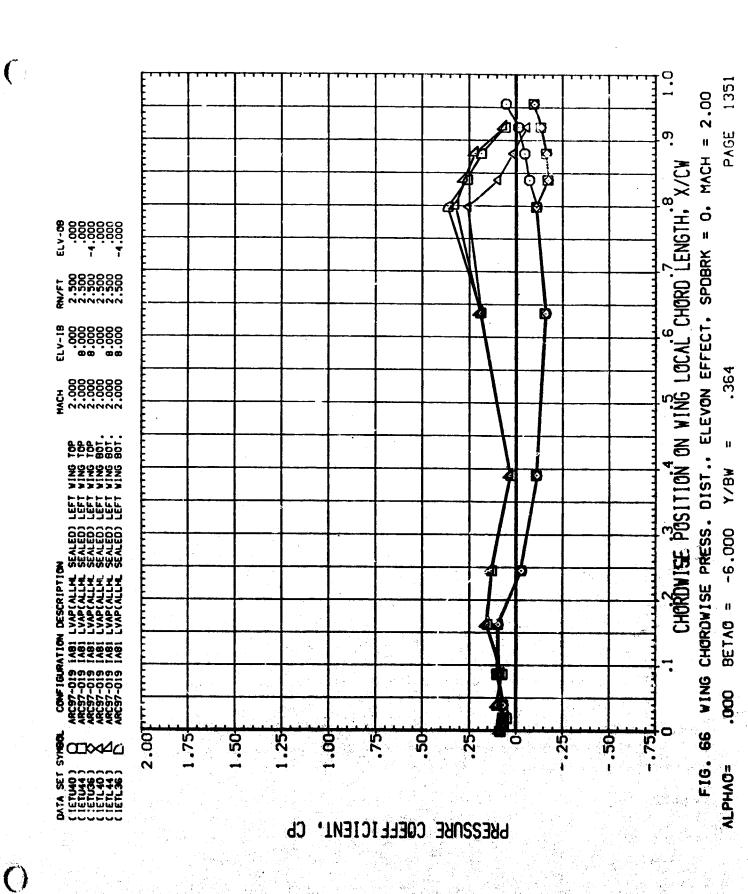
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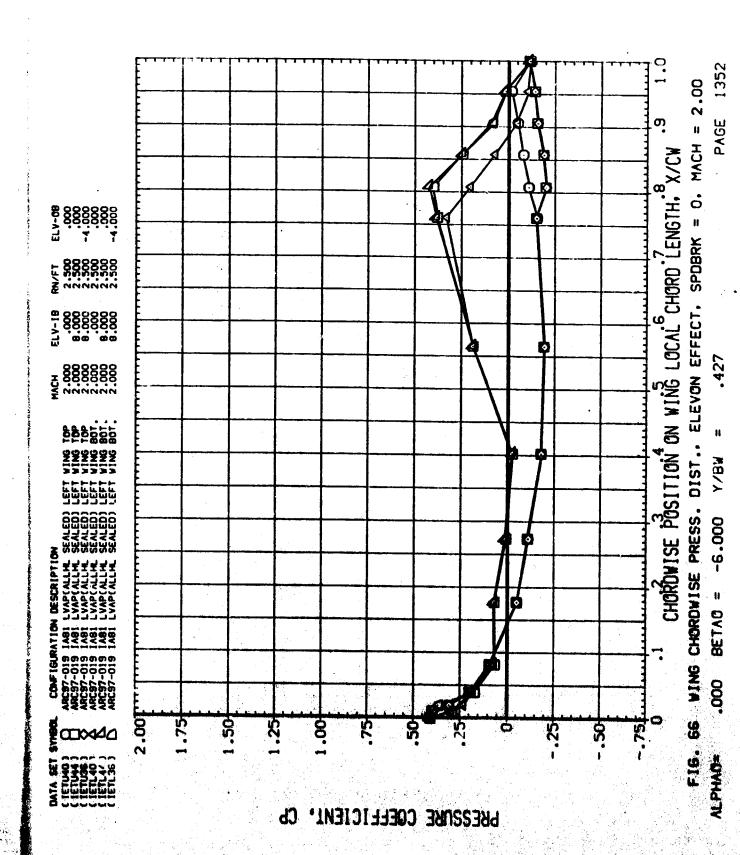
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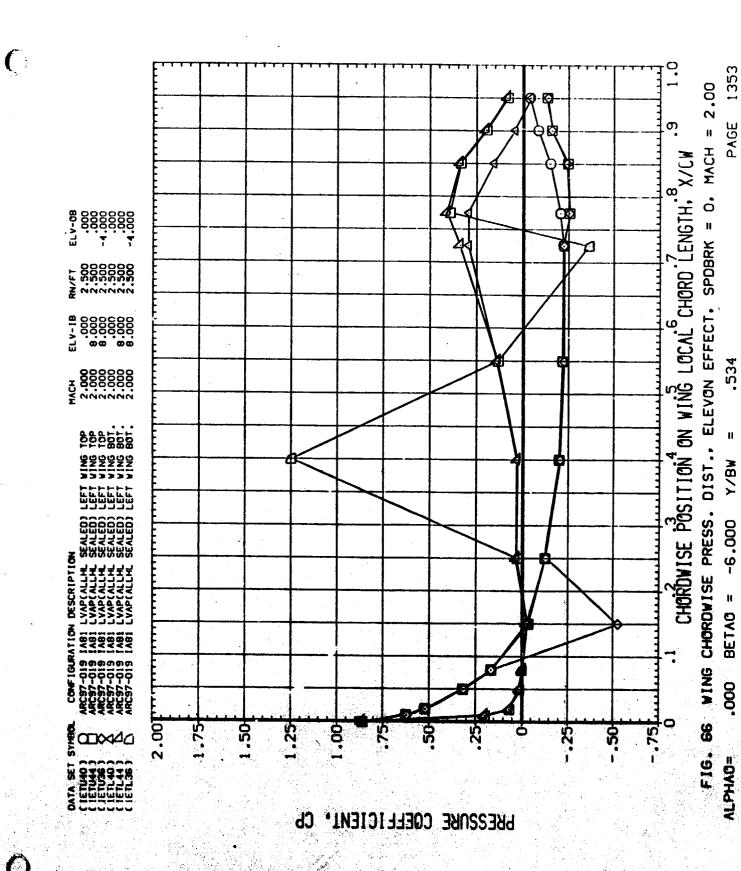
PRESSURE COEFFICIENT,



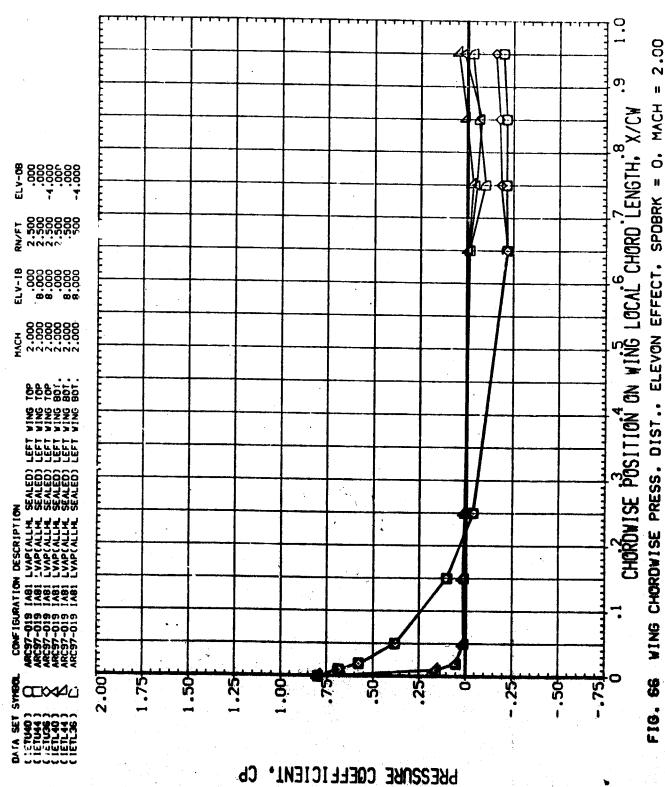
X/BW -6.000 BETAO = F16. 66 ALPHAD=







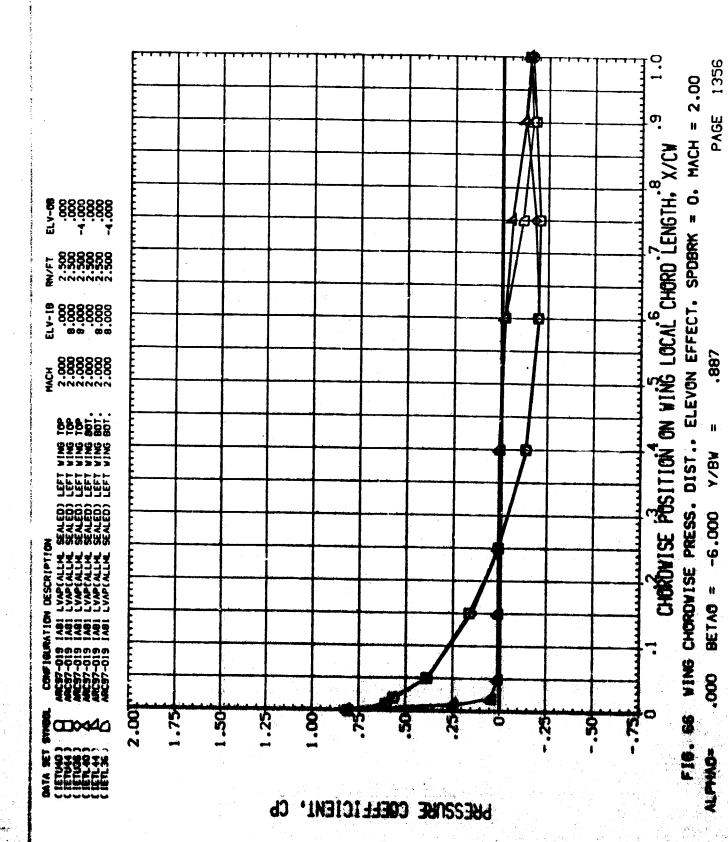
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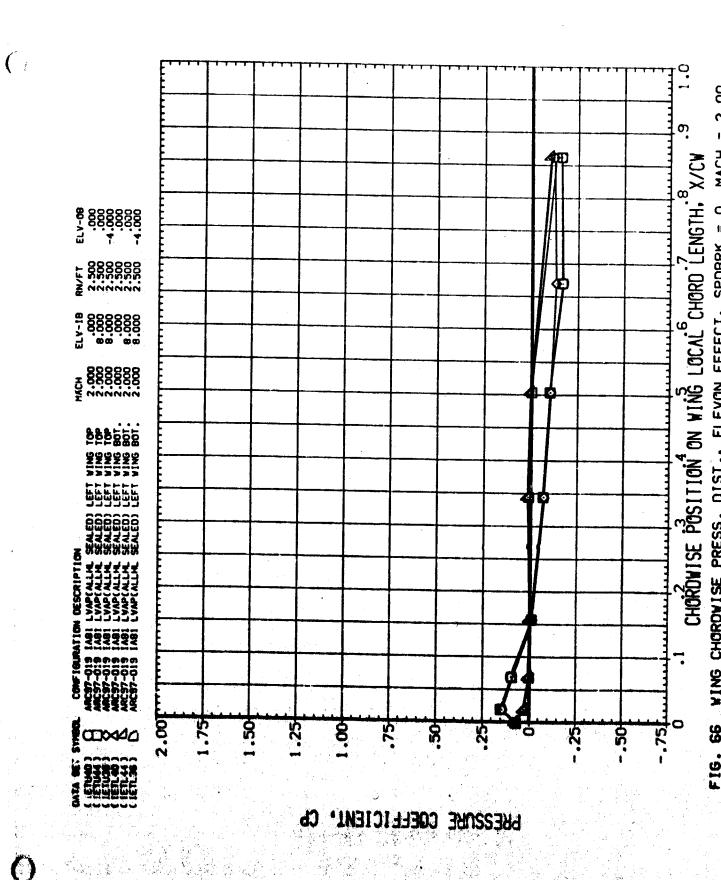


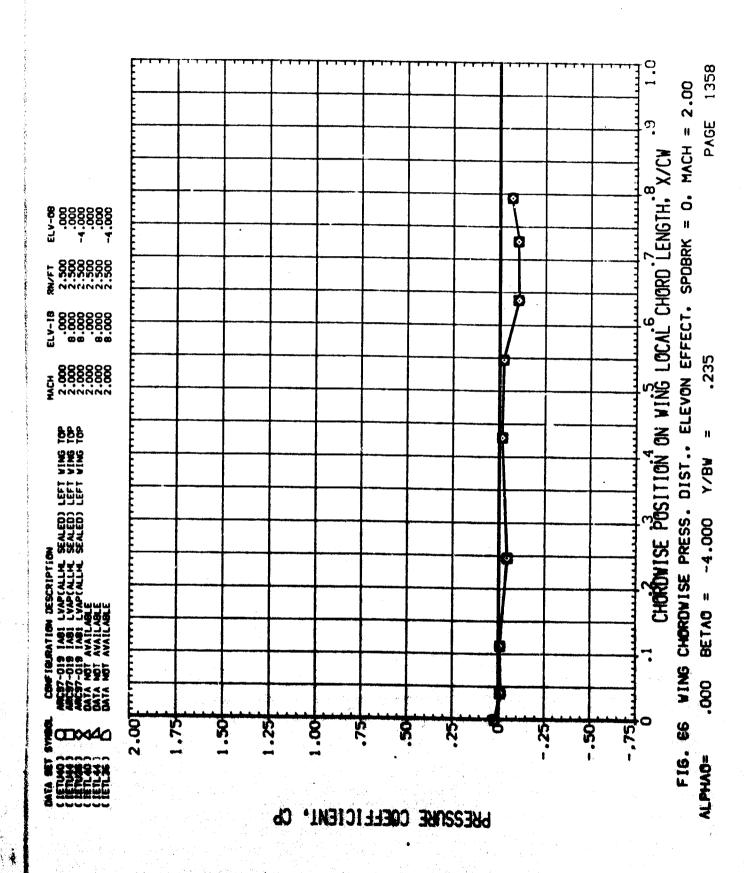
WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPOBRK = 0. ¥/8**%** -6.000 BETAO = 8. F16. 66 AL PHAG=

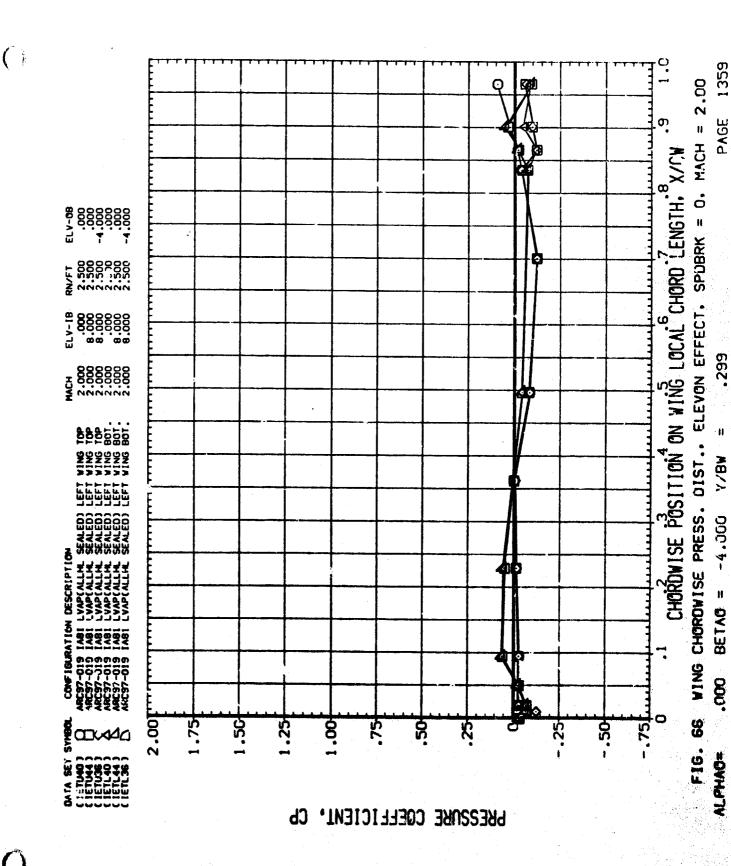
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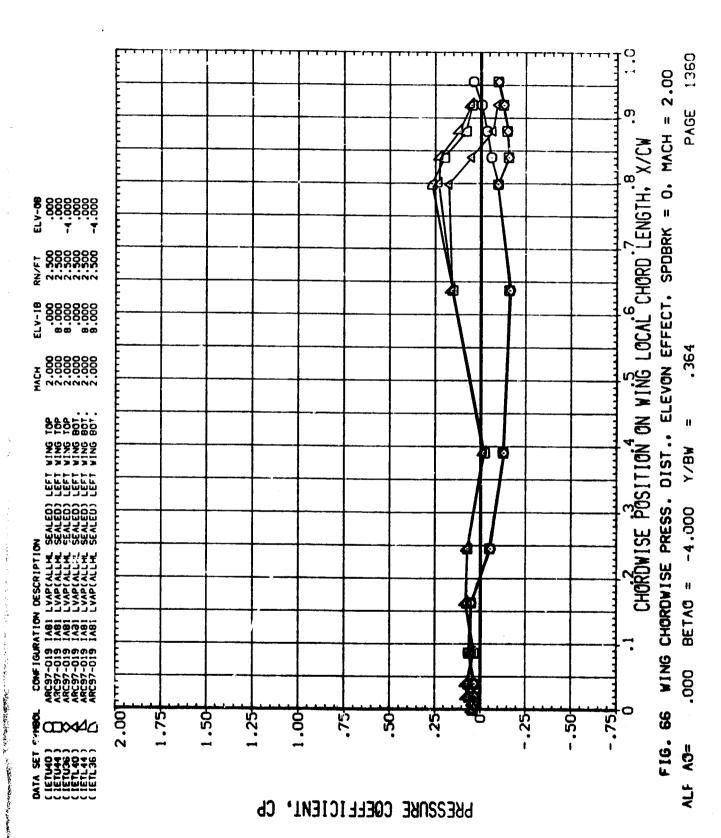
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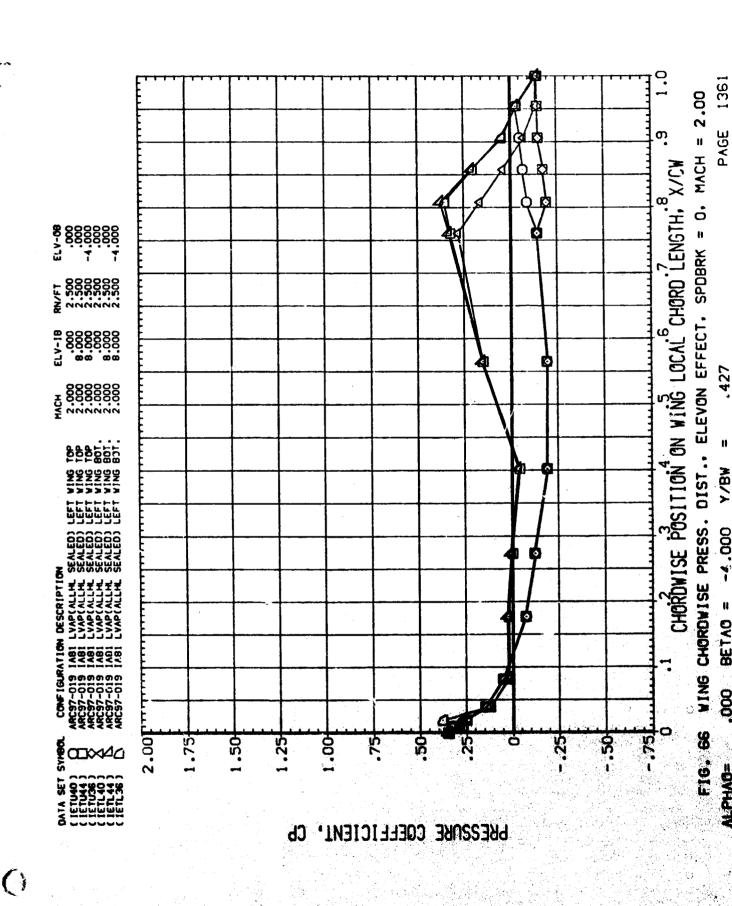


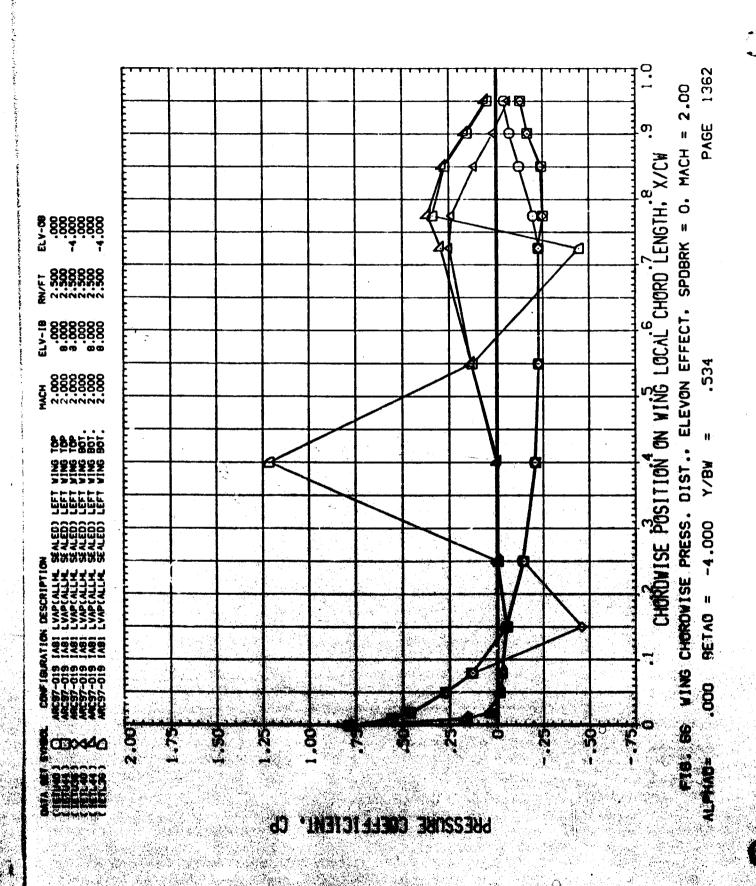


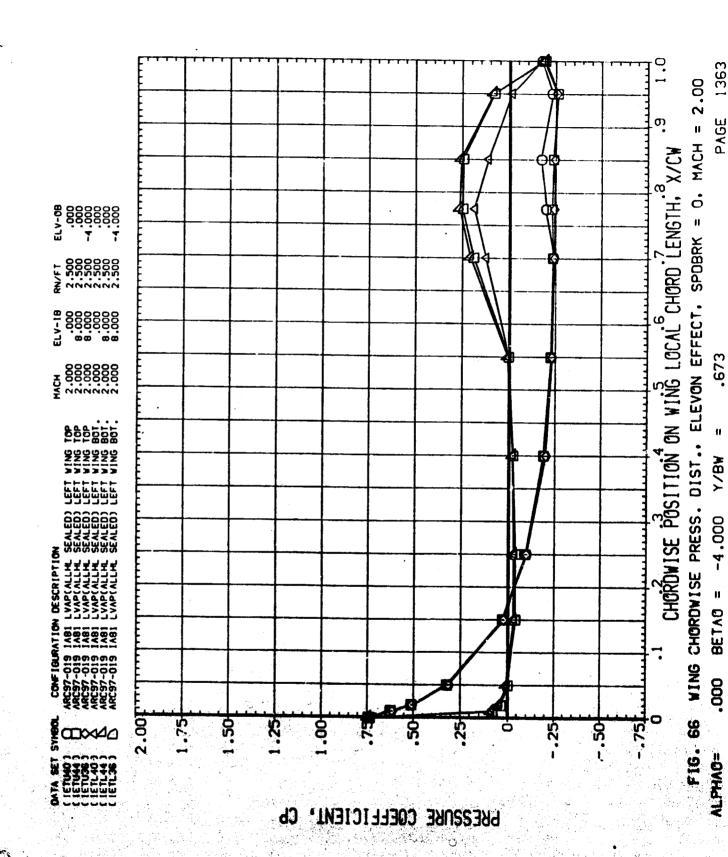


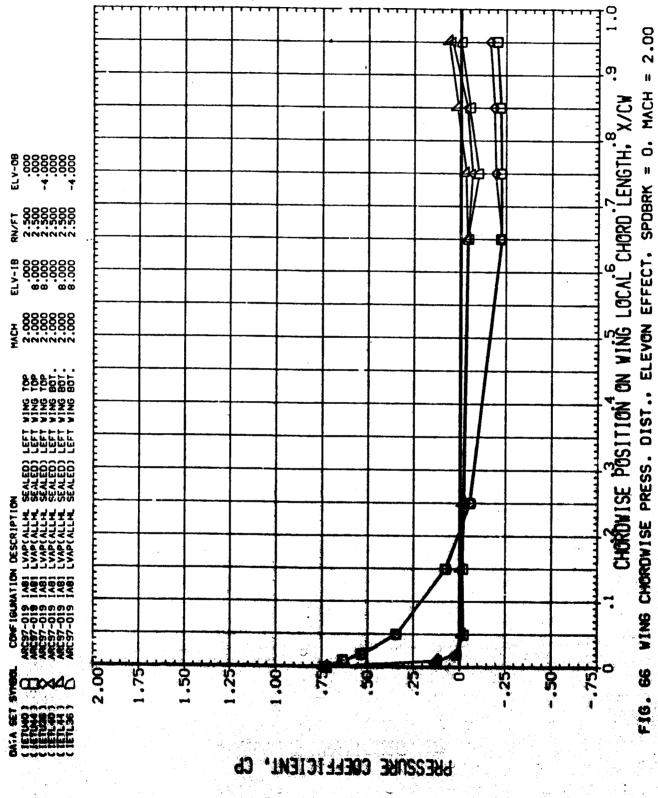




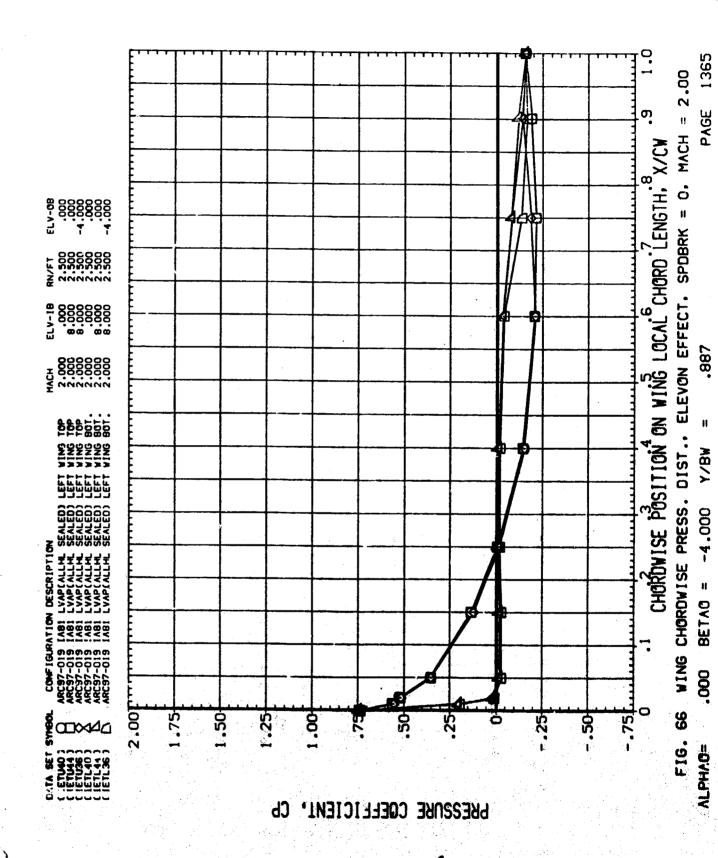


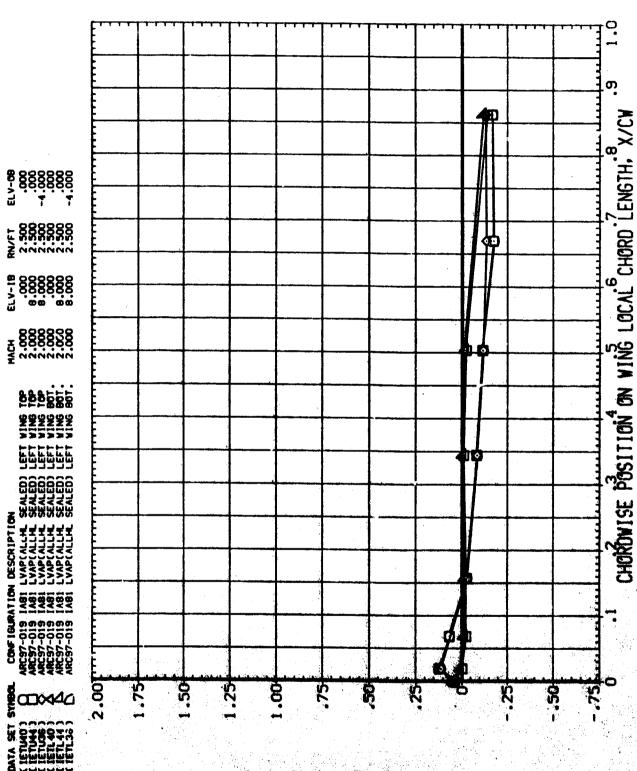






-4.000 BETAG = 900





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WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPOBRK = 0. MACH = 2.00

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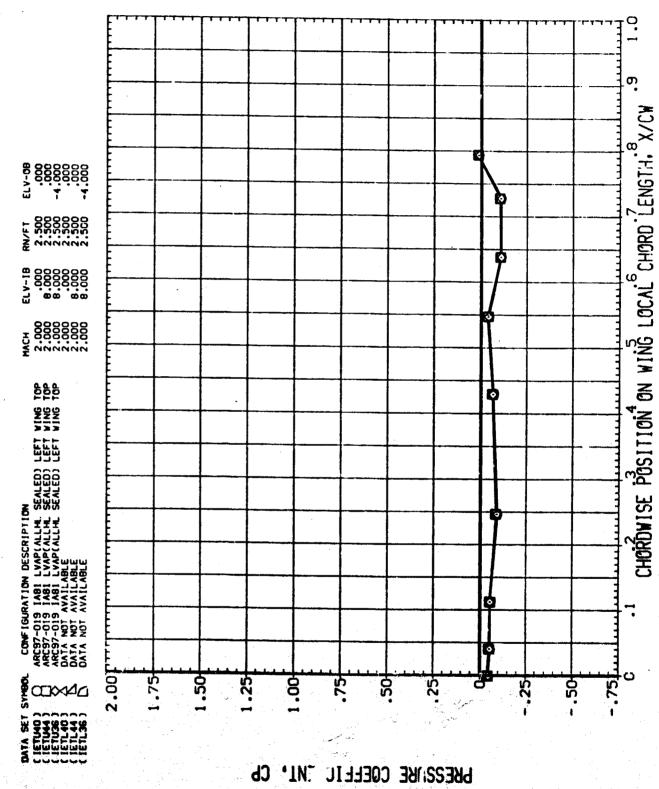
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Y/BW

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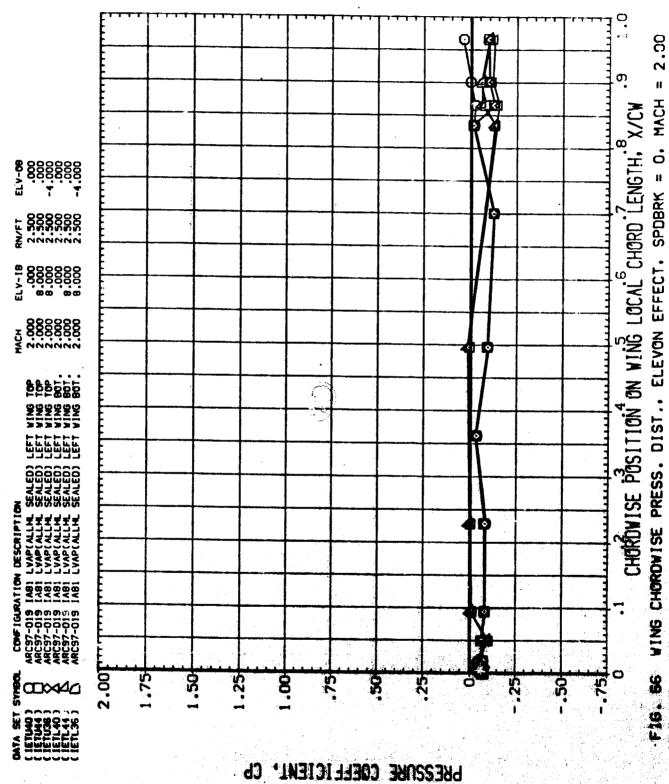
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WING CHORDWISE PRESS. DIST., ELEVON EFFECT, SPDBRK = 0, MACH = 2.00 .000 Y/BW BETAO = 000. F1G. 66 ALPHA0=

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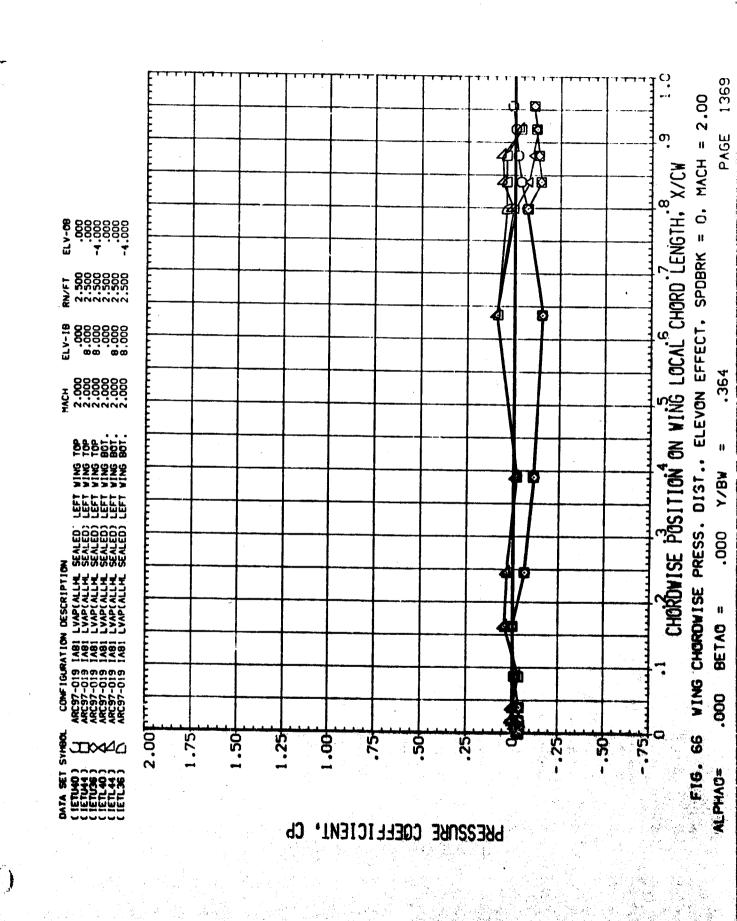
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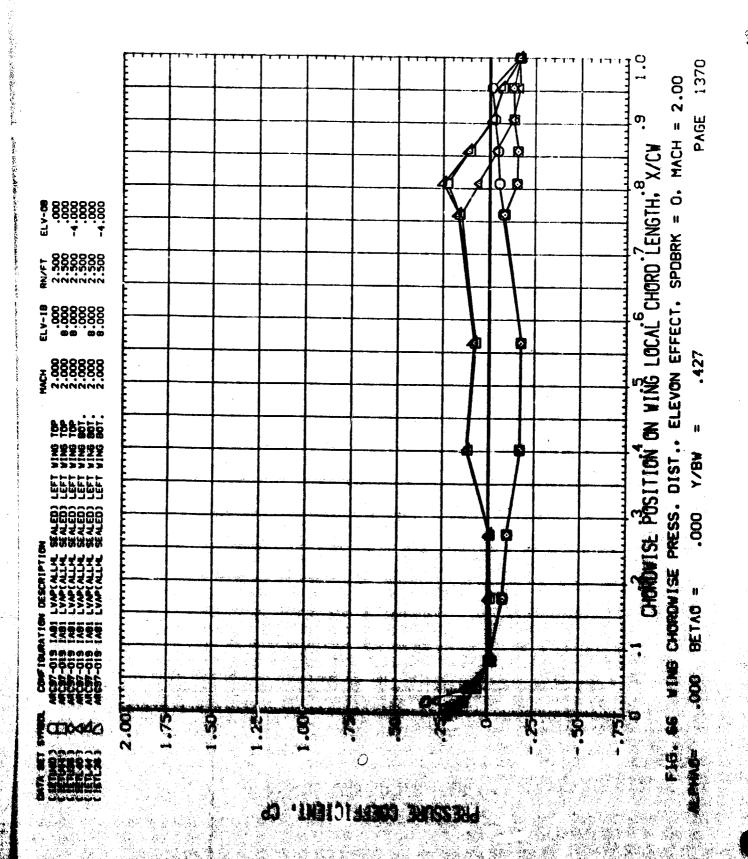
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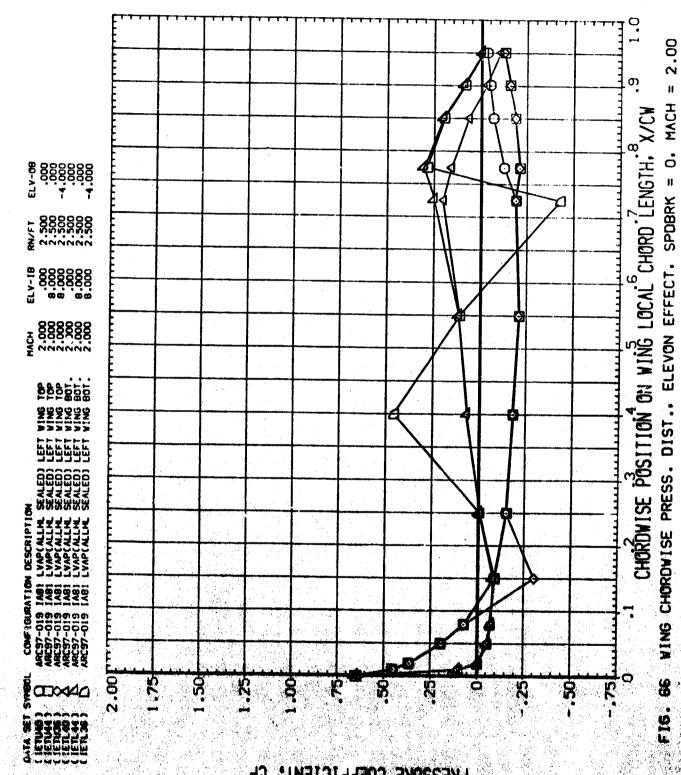
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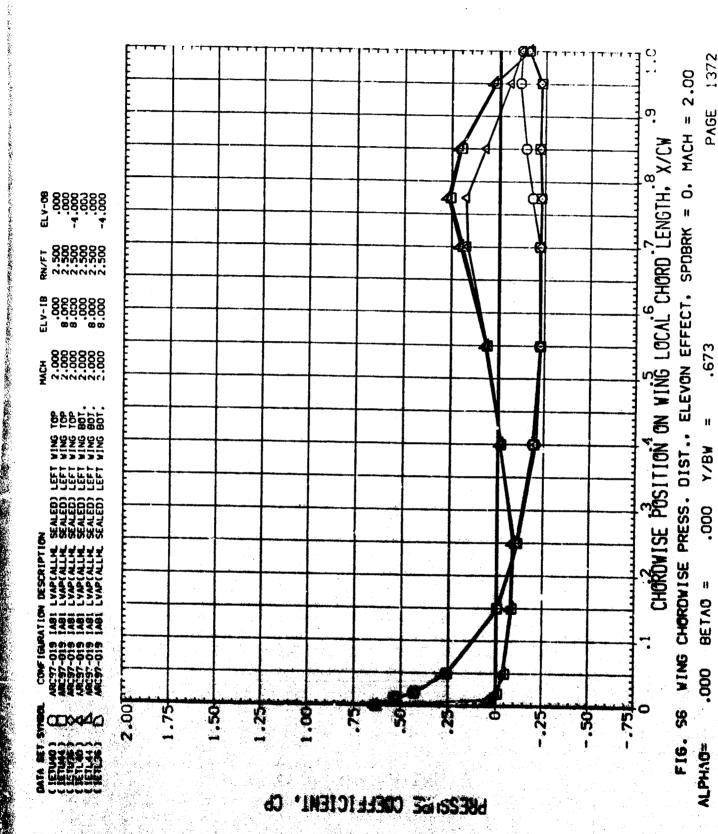


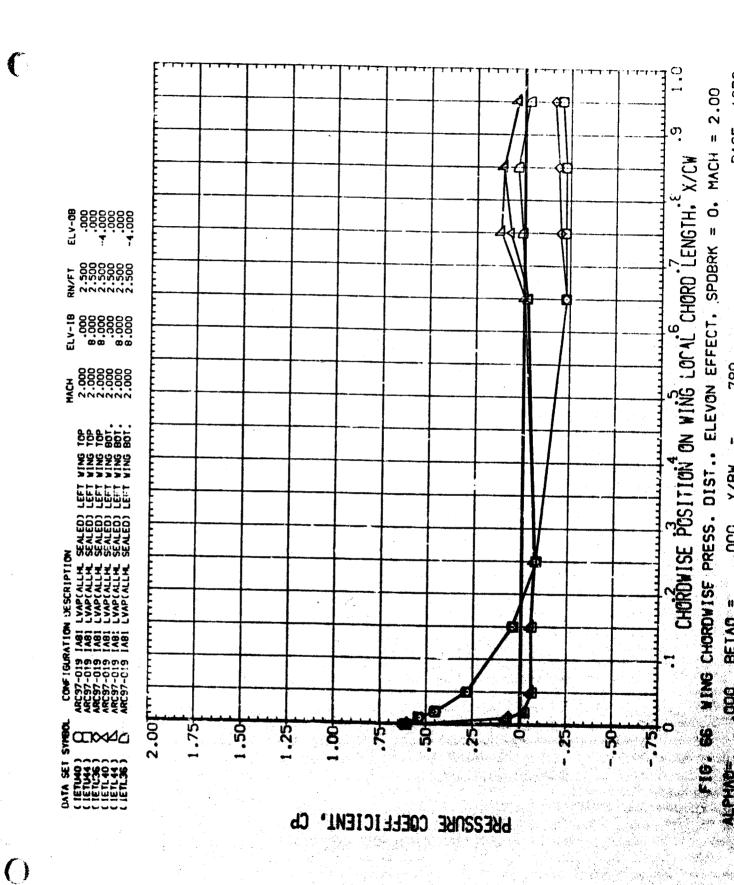
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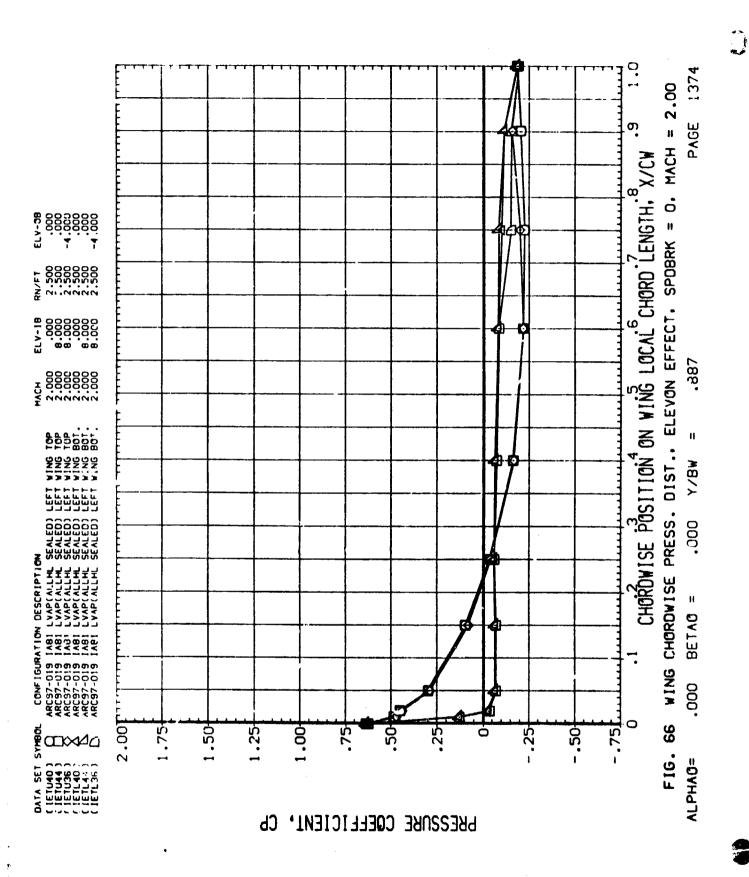
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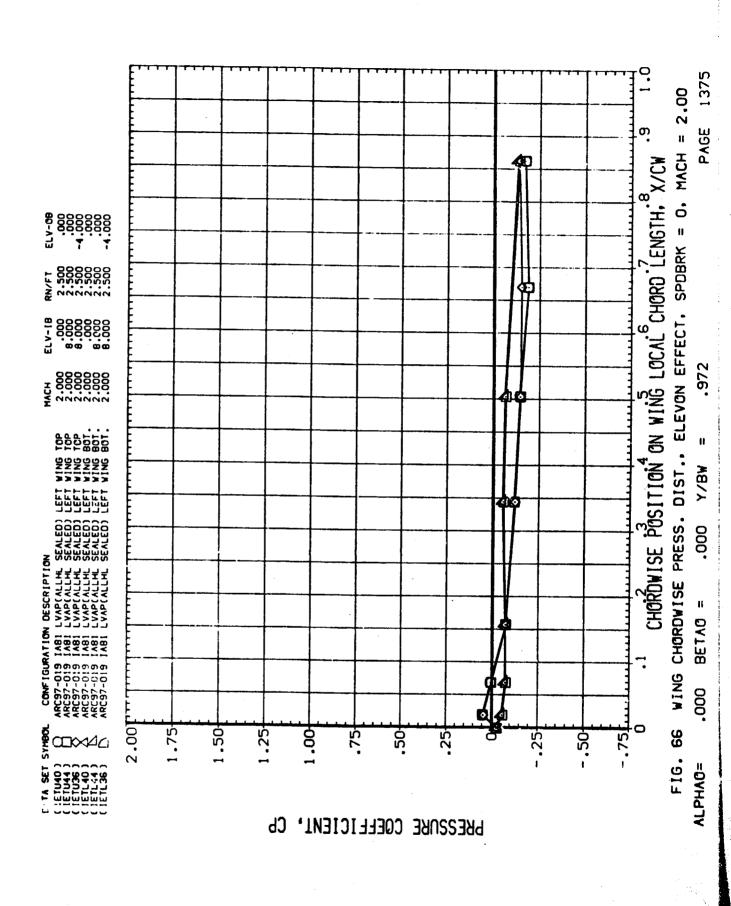




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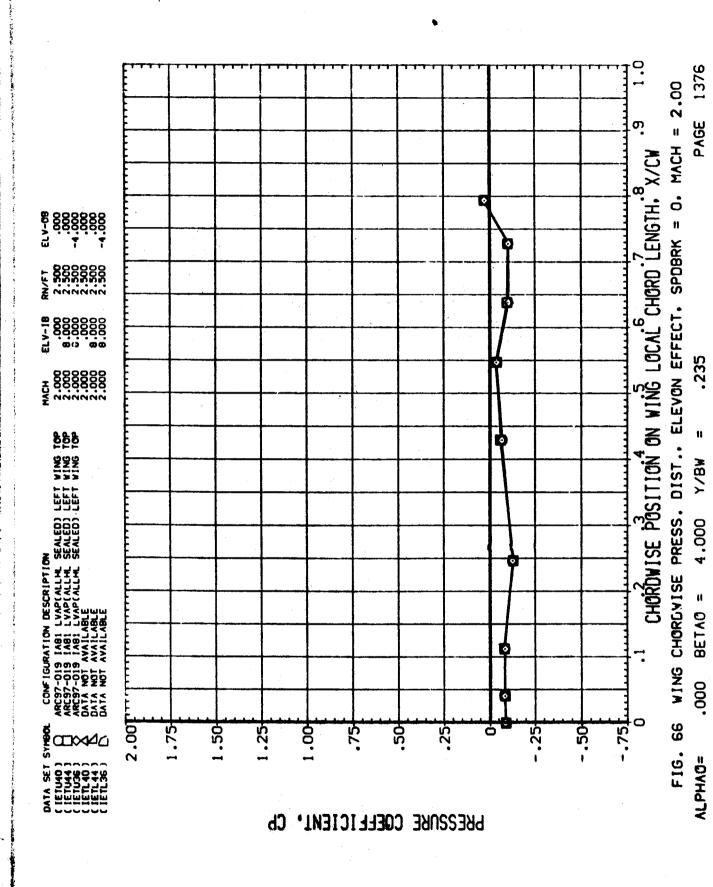


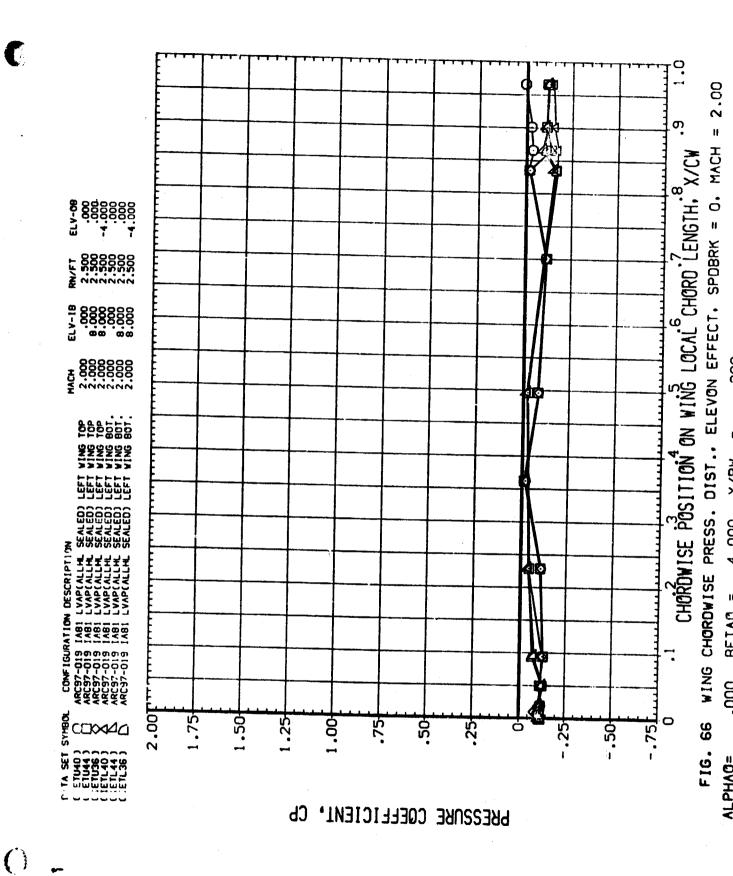
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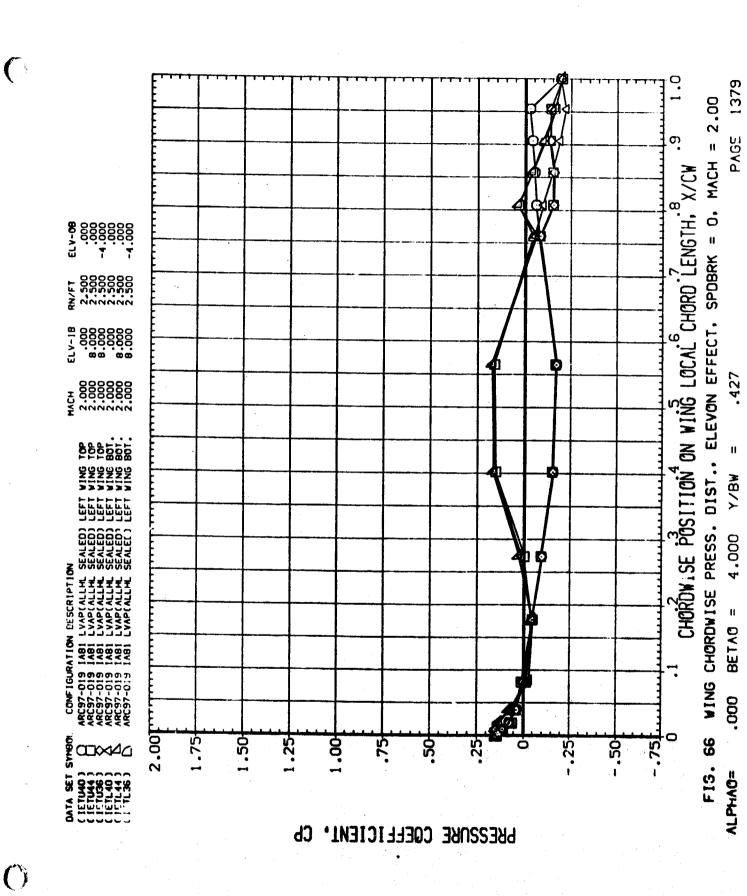
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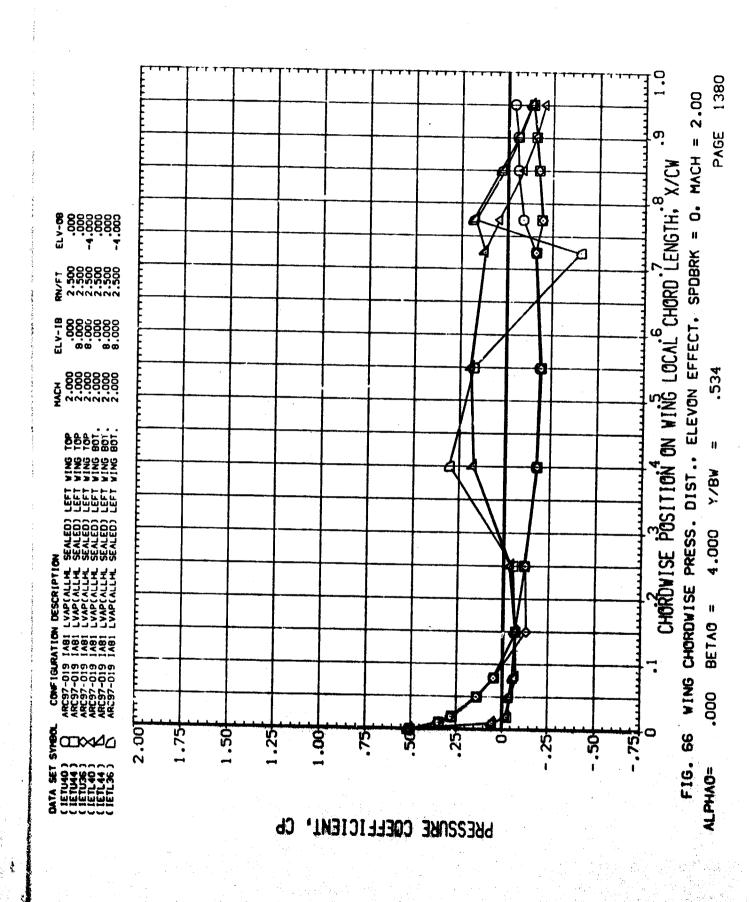
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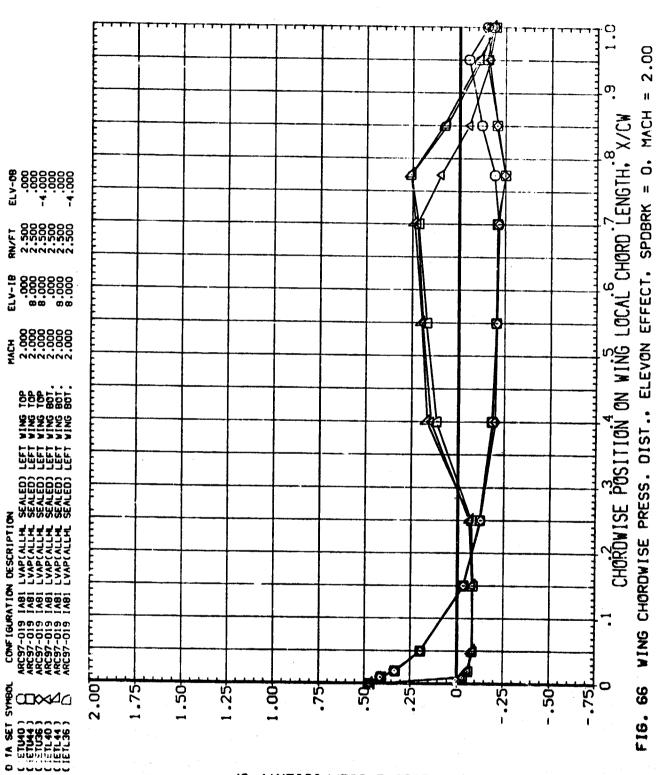
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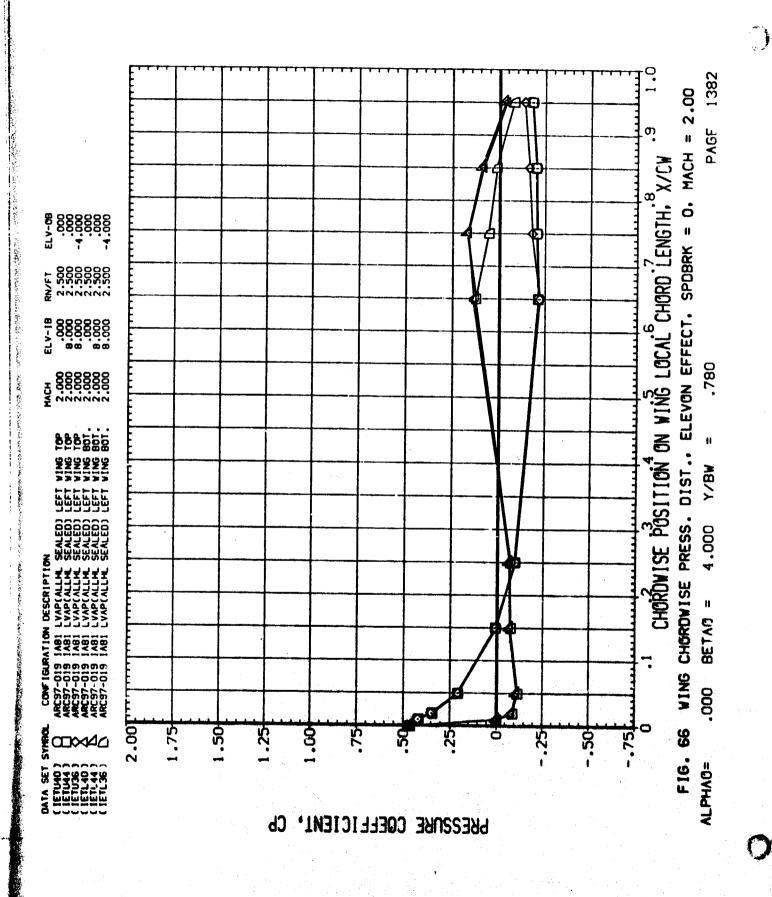
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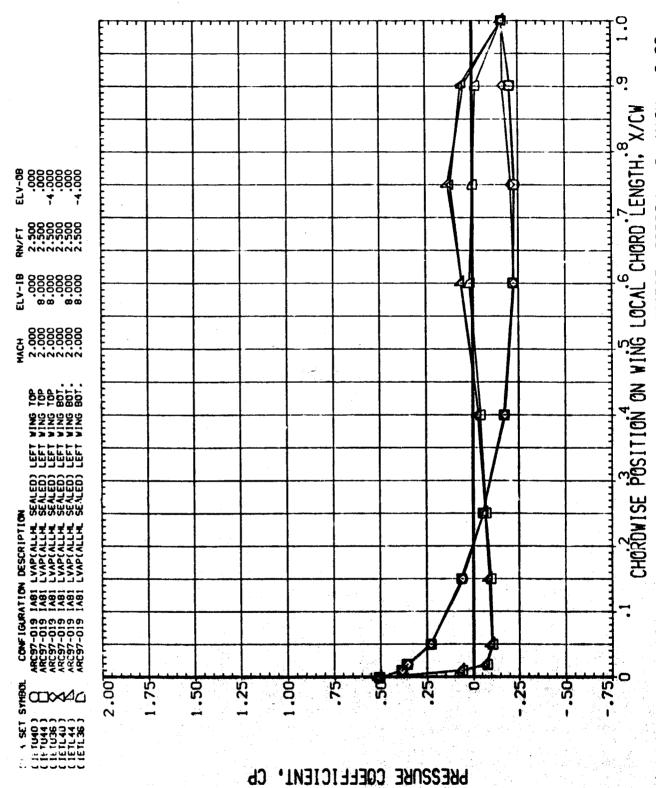
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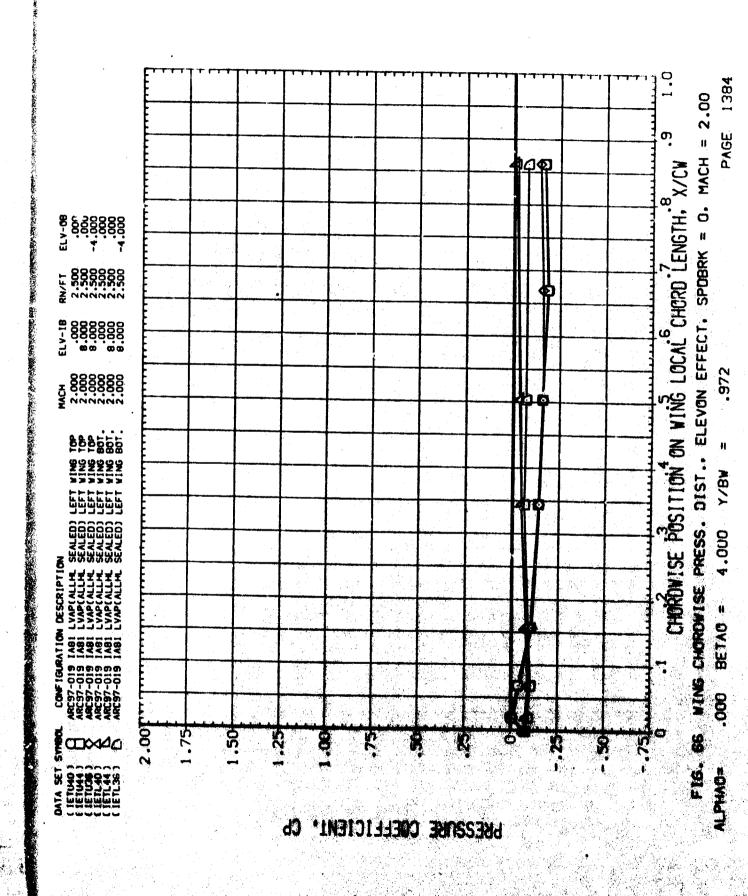
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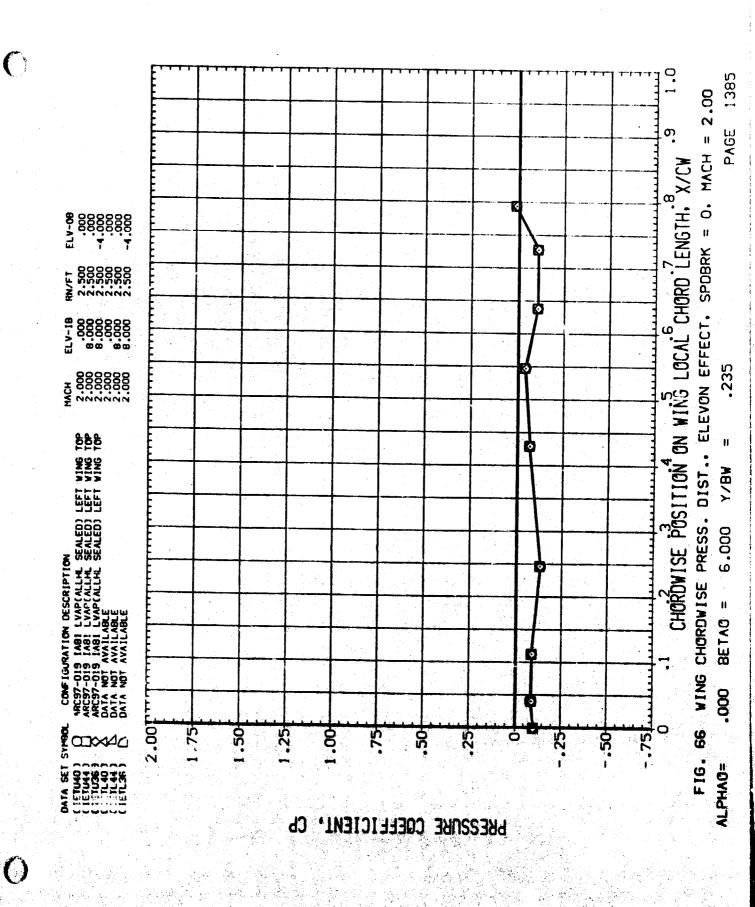


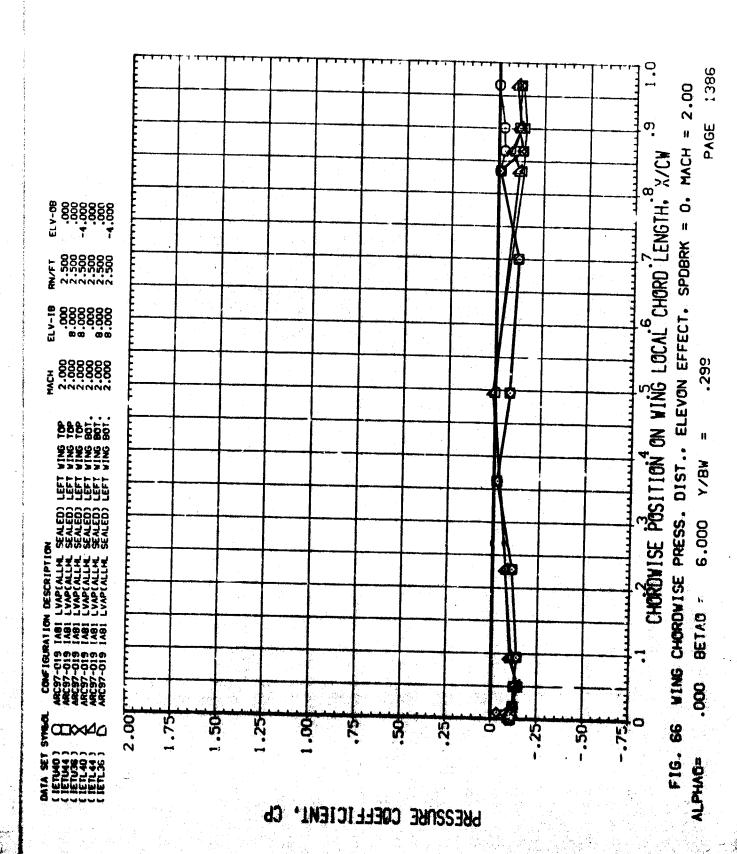


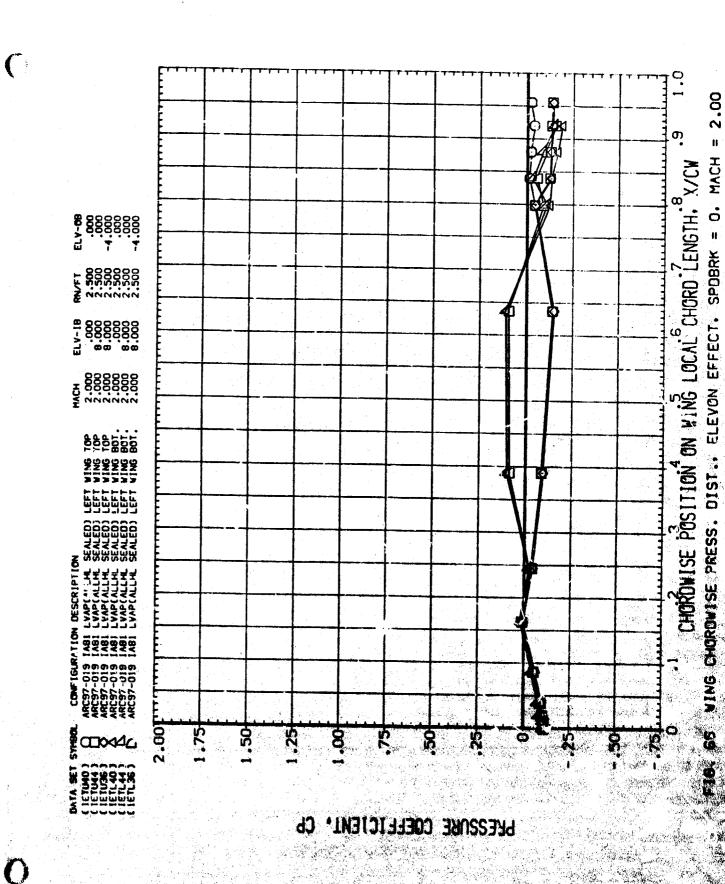
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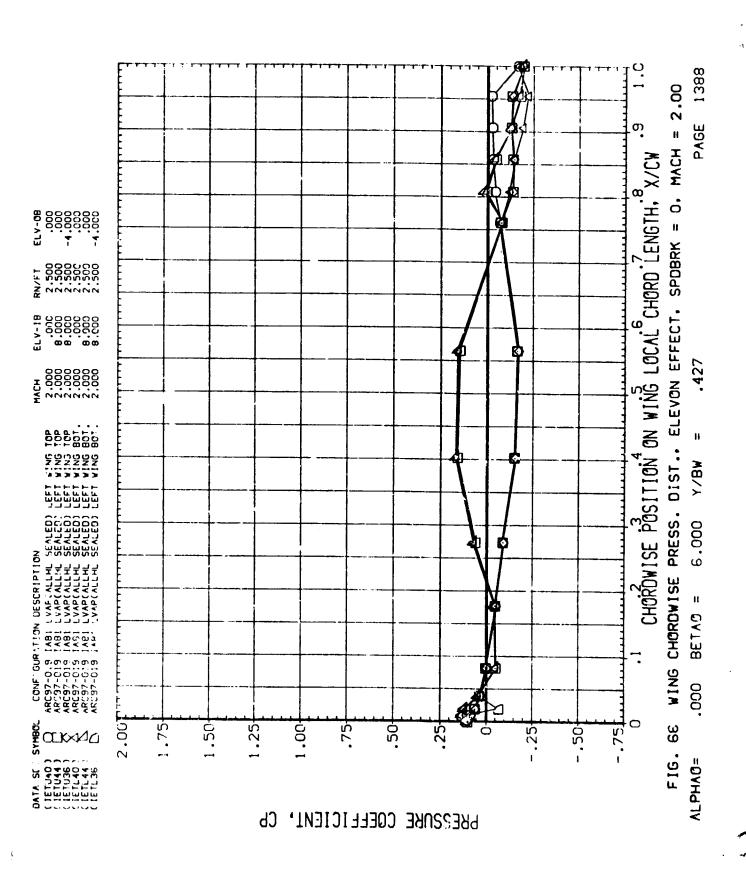
PAGE 1383 WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPOBRK = 0. MACH = 2.00 Y/BW 4.000 BETAG = 000. FIG. 66 ALPHA0=

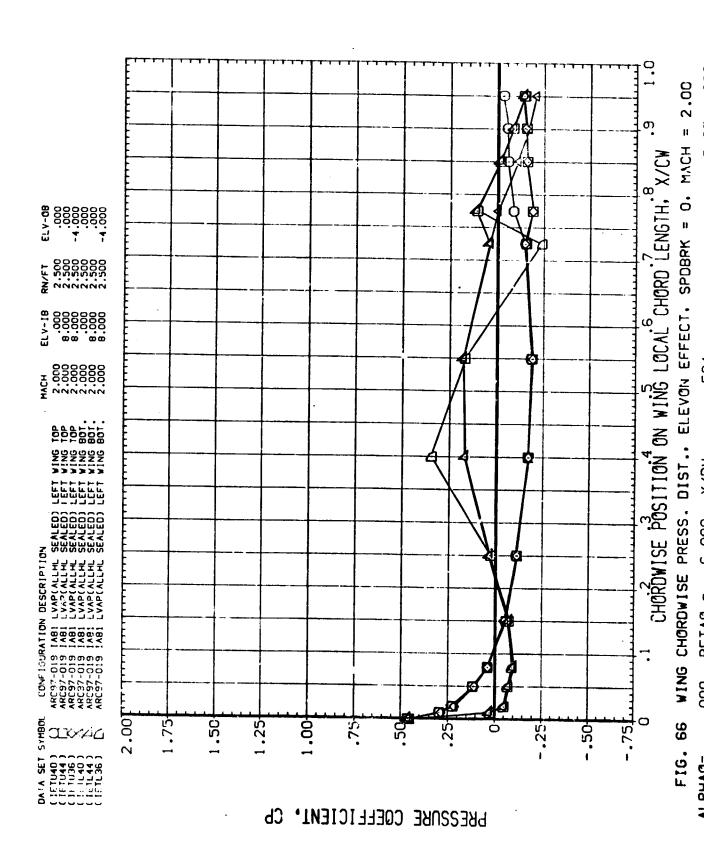












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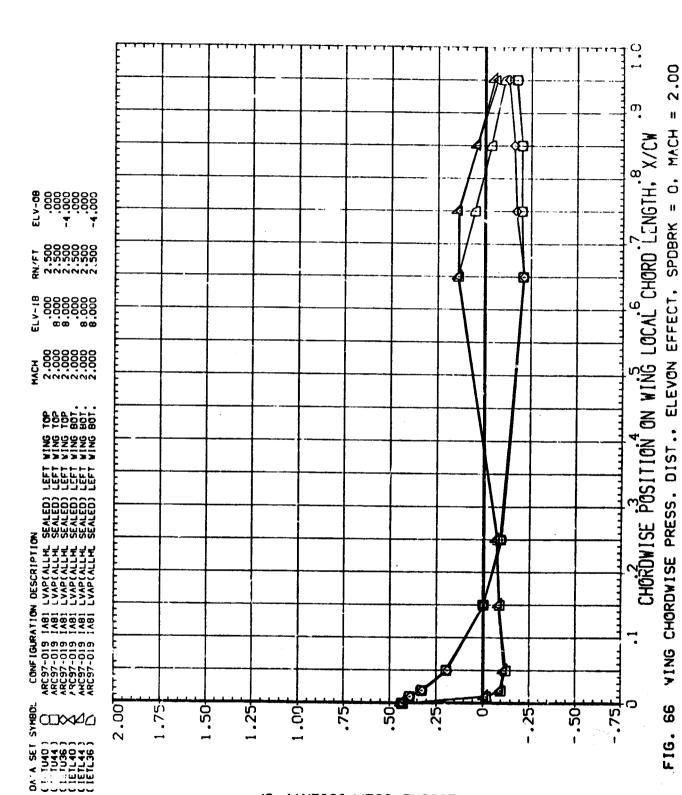
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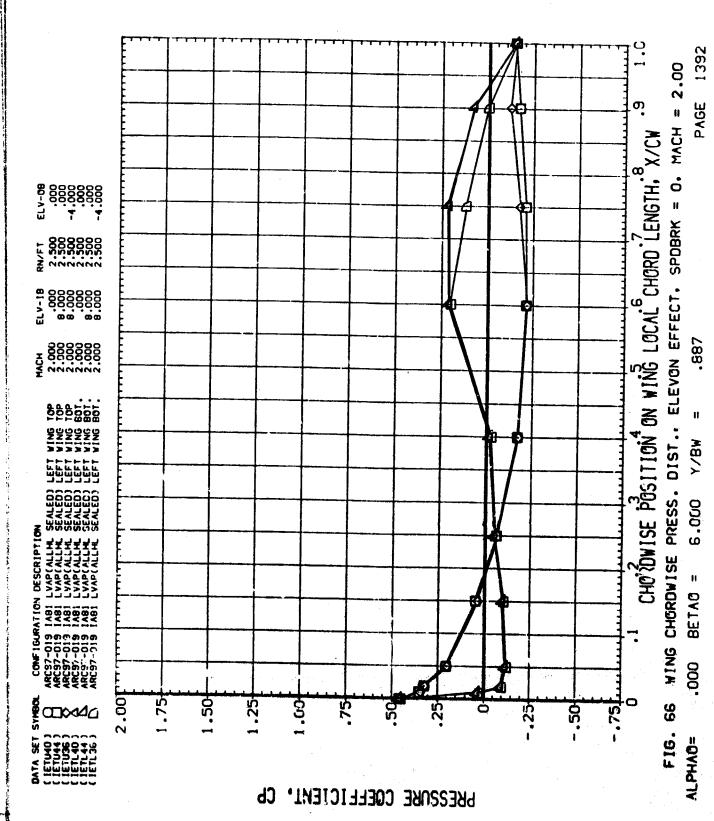
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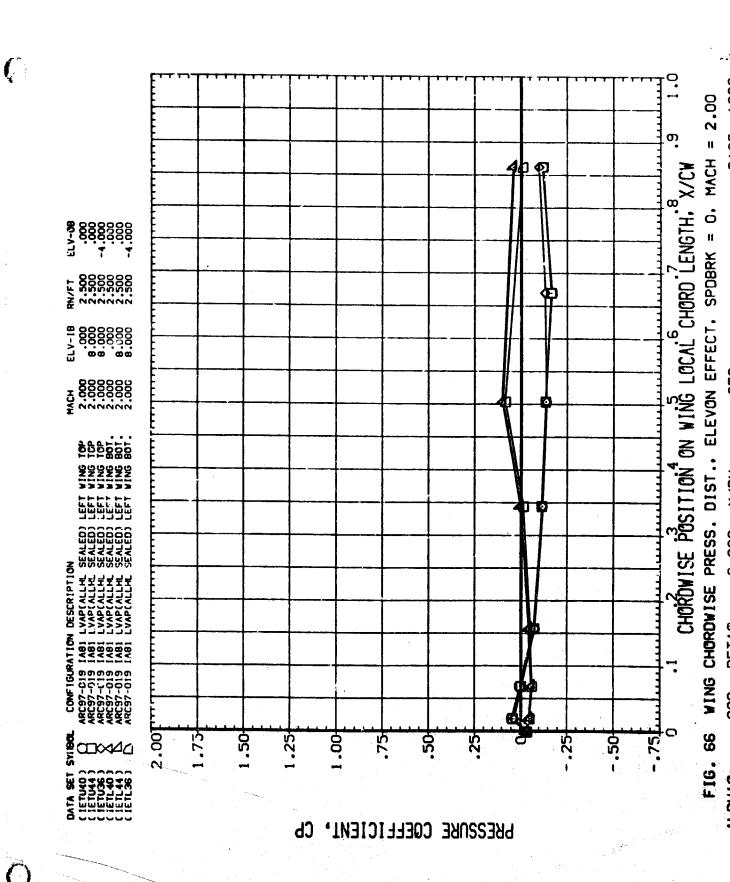
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FIG. 66 WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPDBRK = 0. MACH = 2.00 CHORDWISE POSITION ON WING LOCAL CHORD LENGTH, BX/CW 11 Y/BW -4.000 BETAO = 4.000 ALPHAG=

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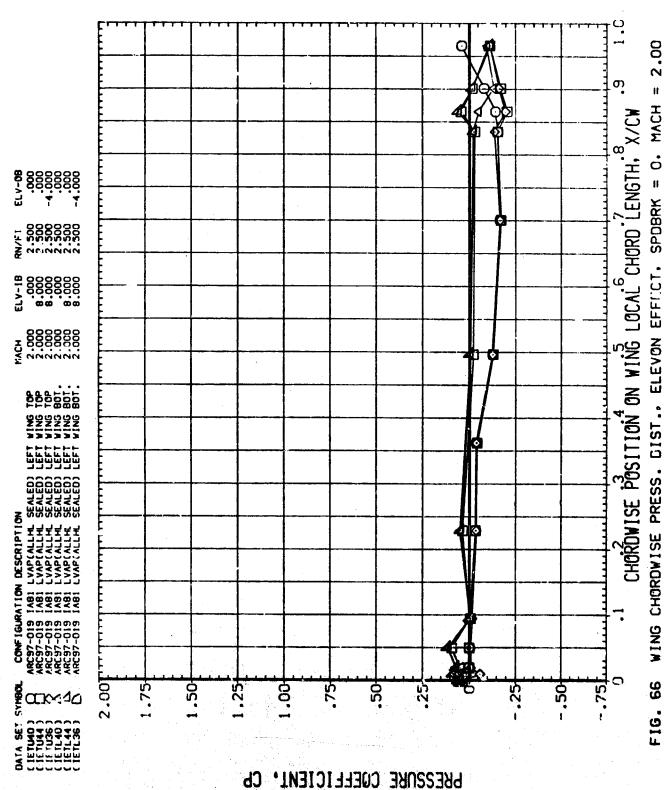


FIG. 66 WING CHORDWISE PRESS. BIST., ELEVON EFFICT. SPDBRK = 0. -4.000 4.000

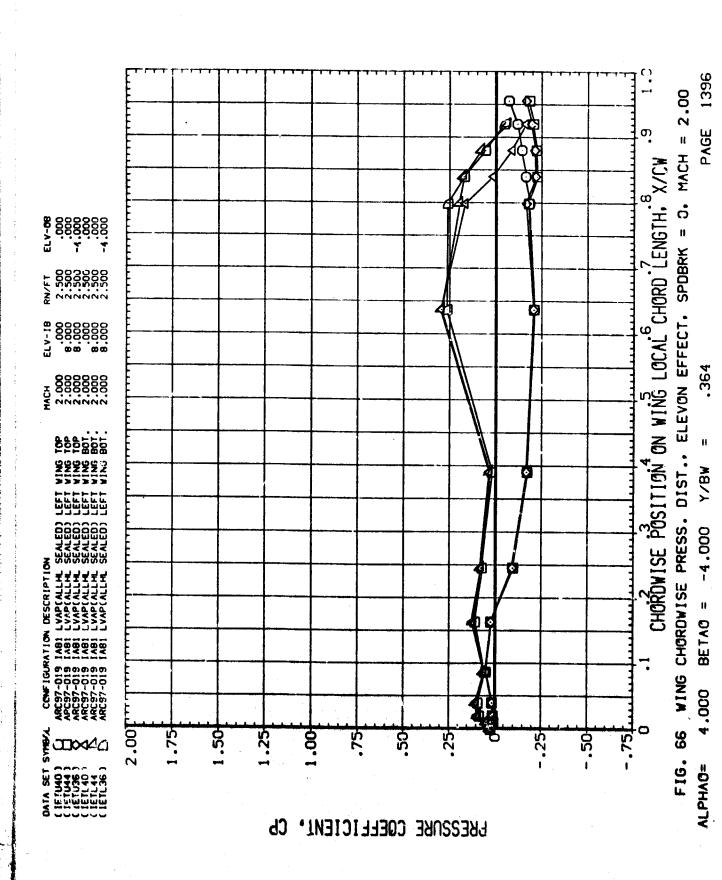
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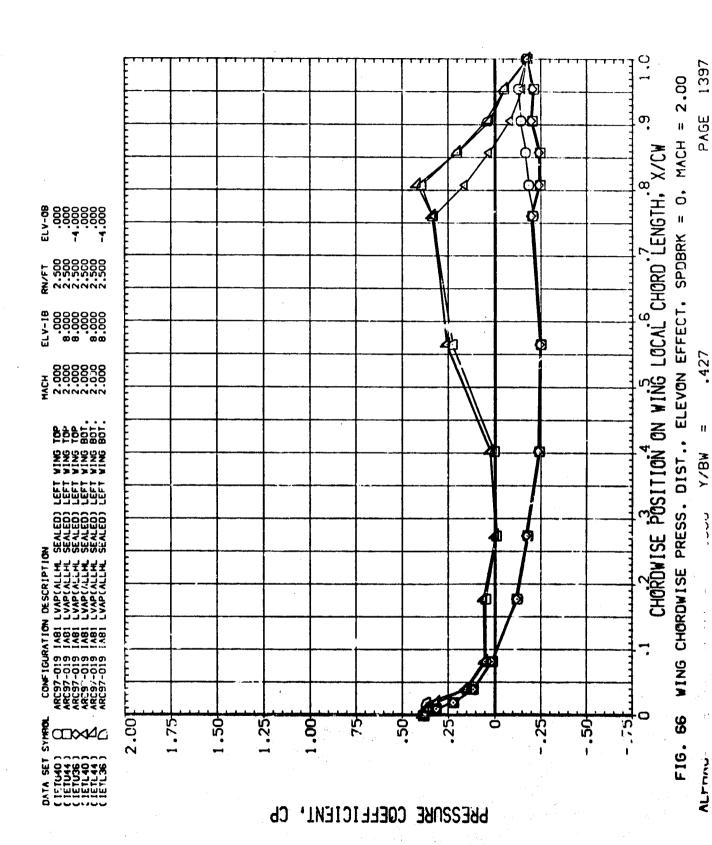
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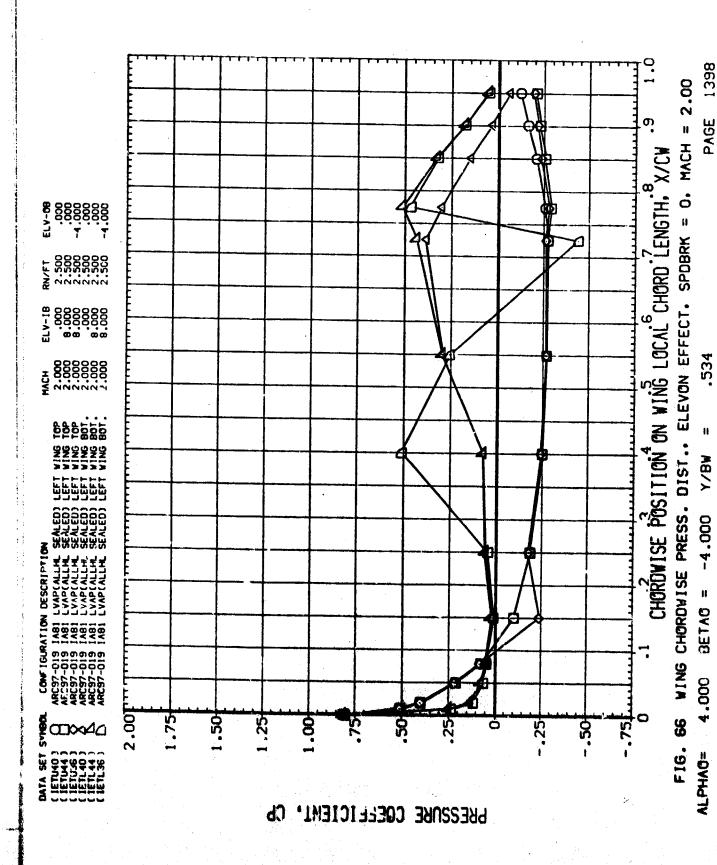
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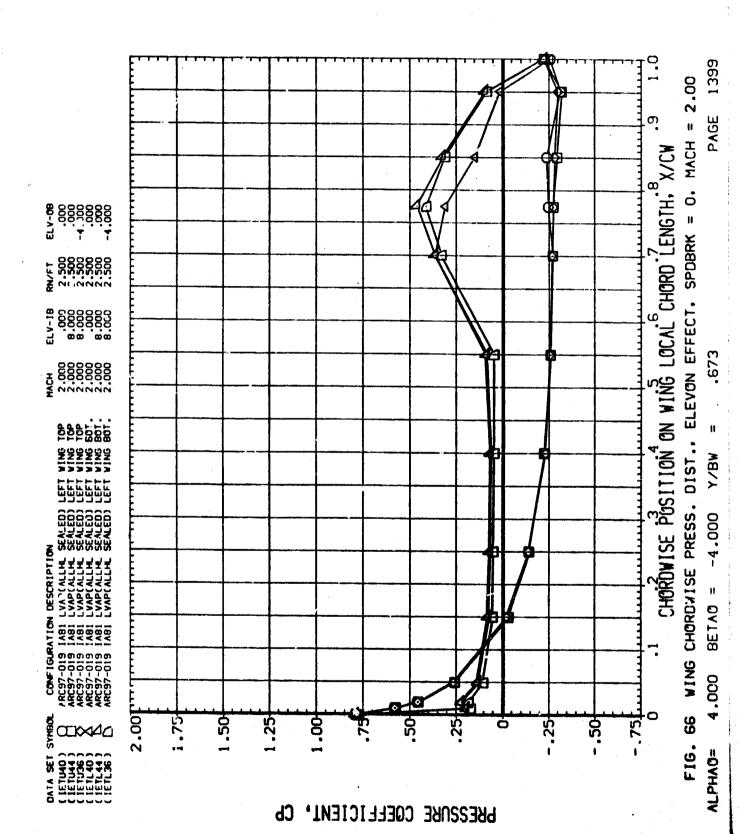
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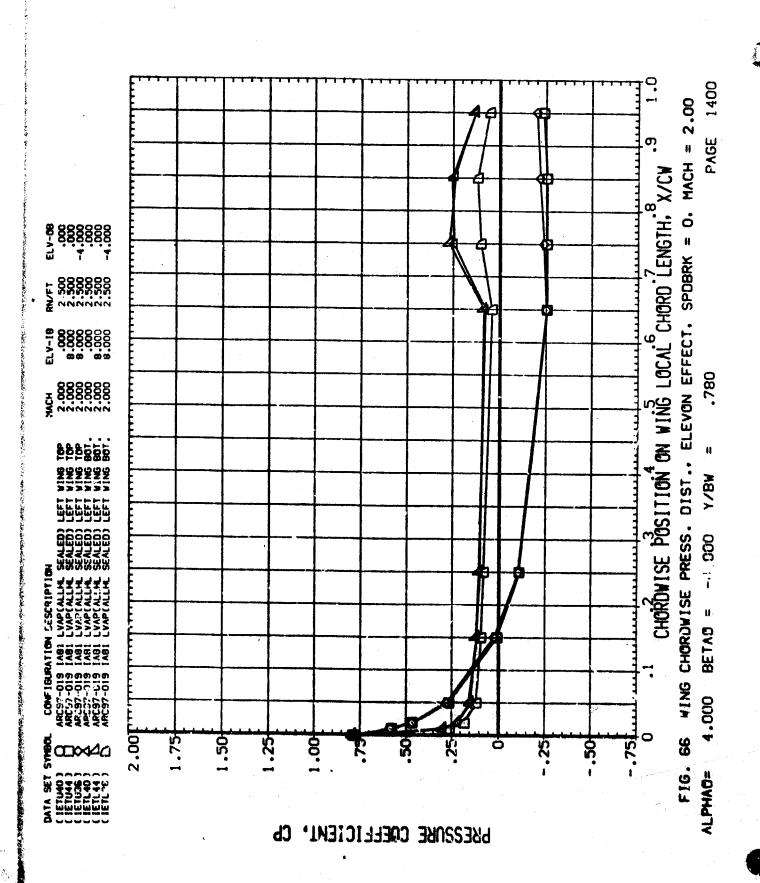
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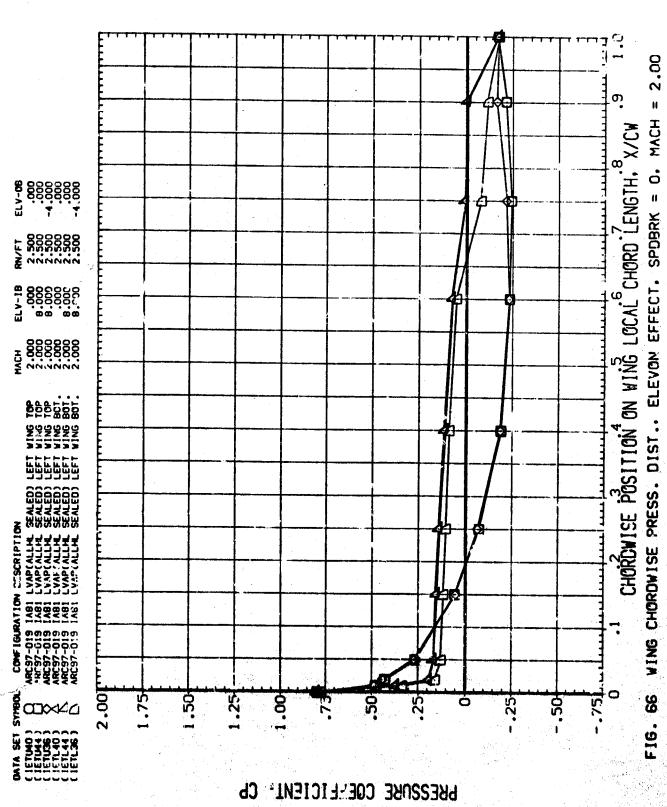












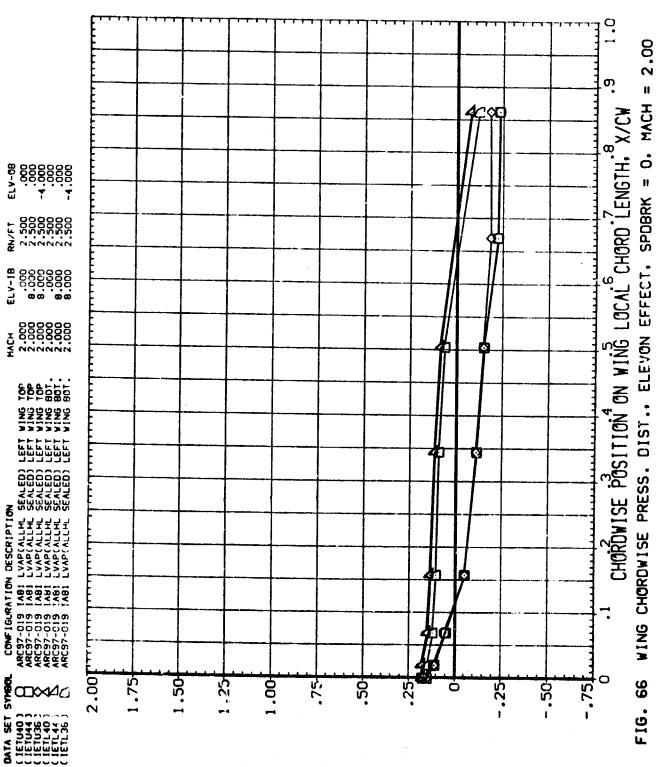
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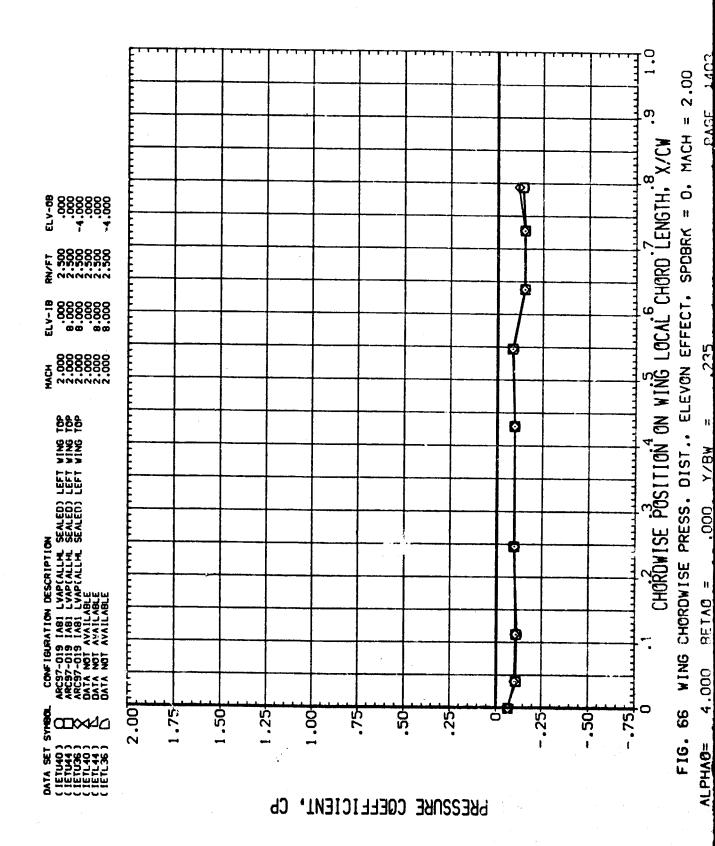
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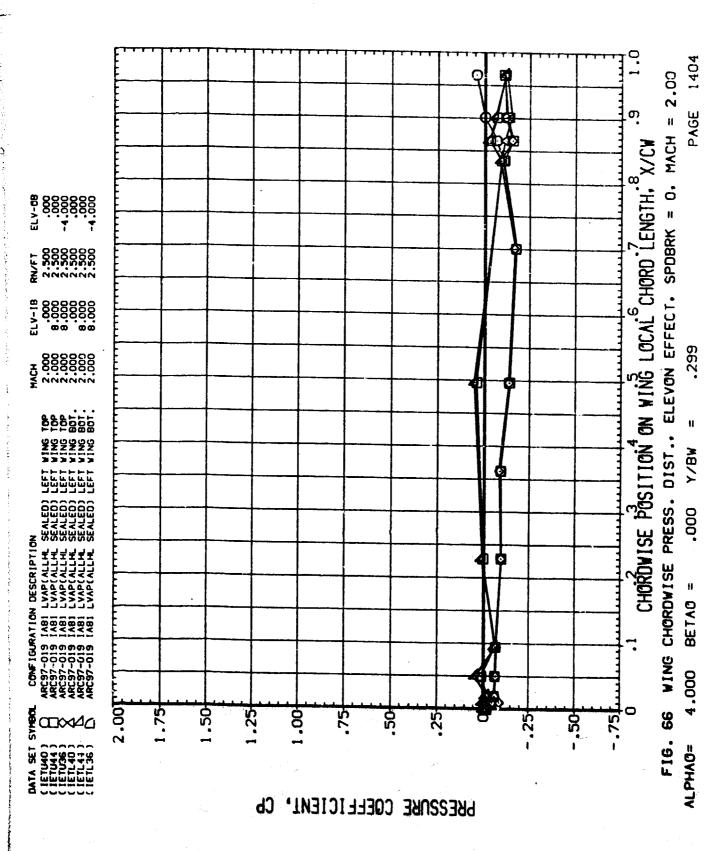
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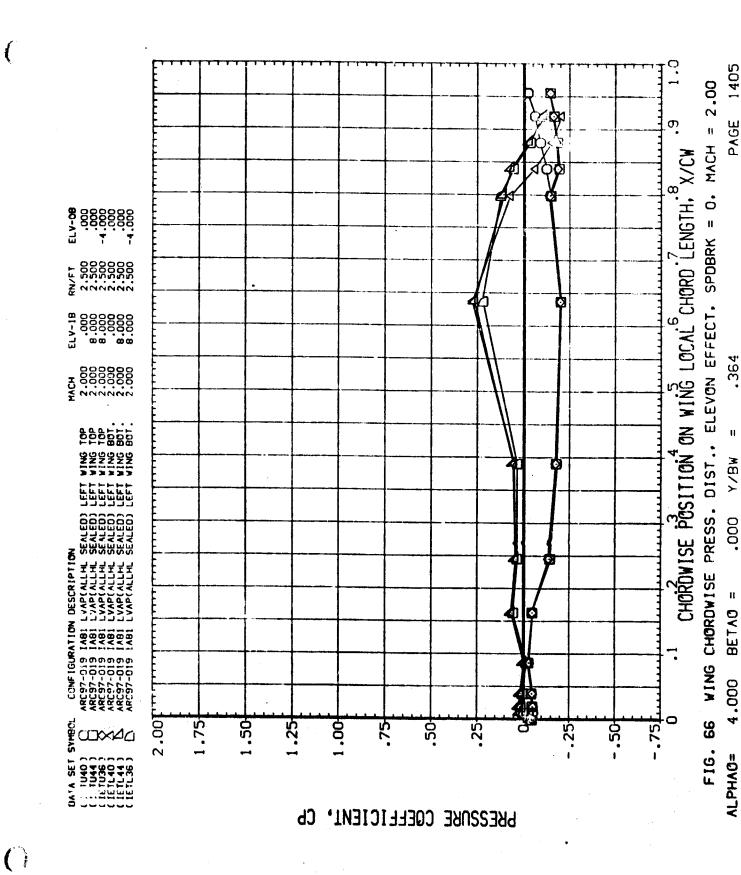
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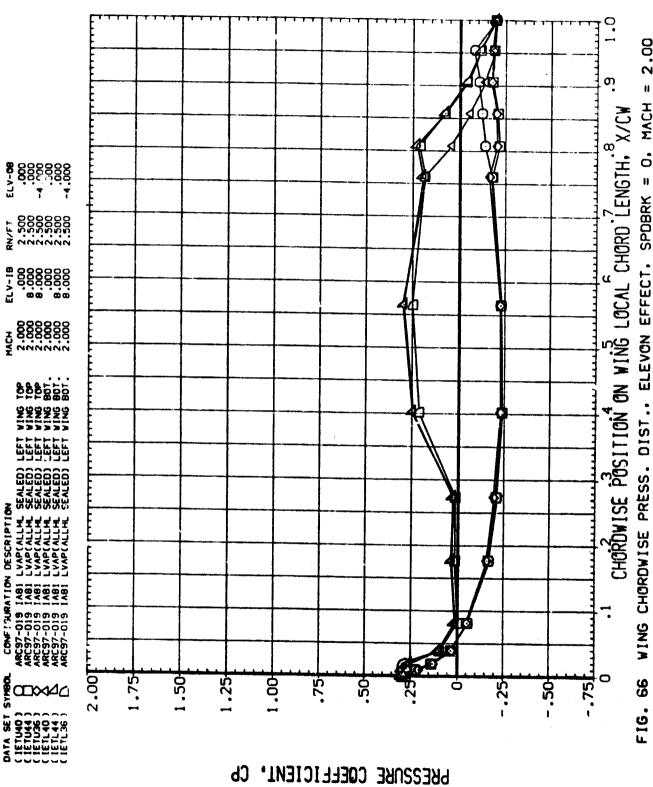
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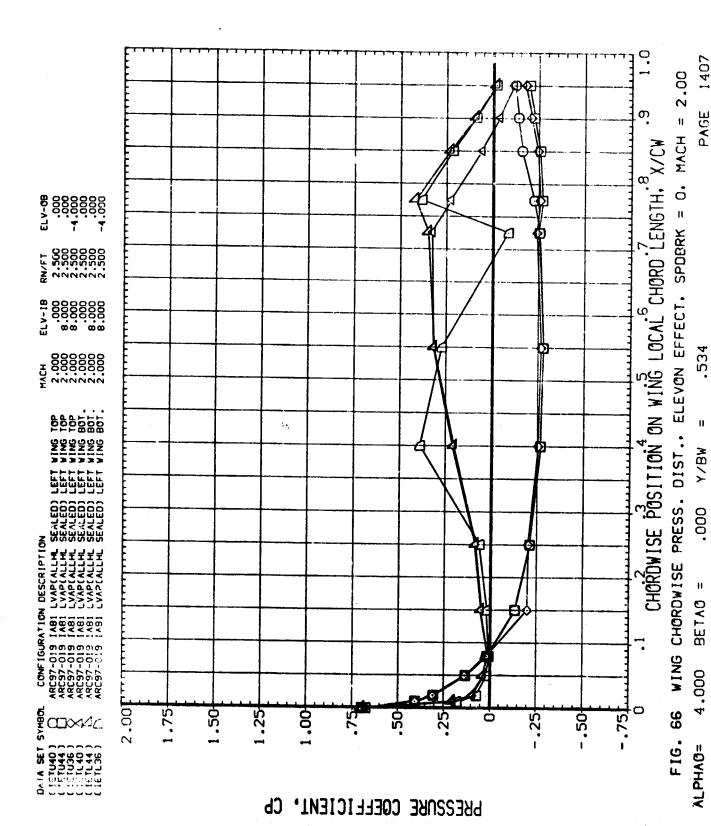
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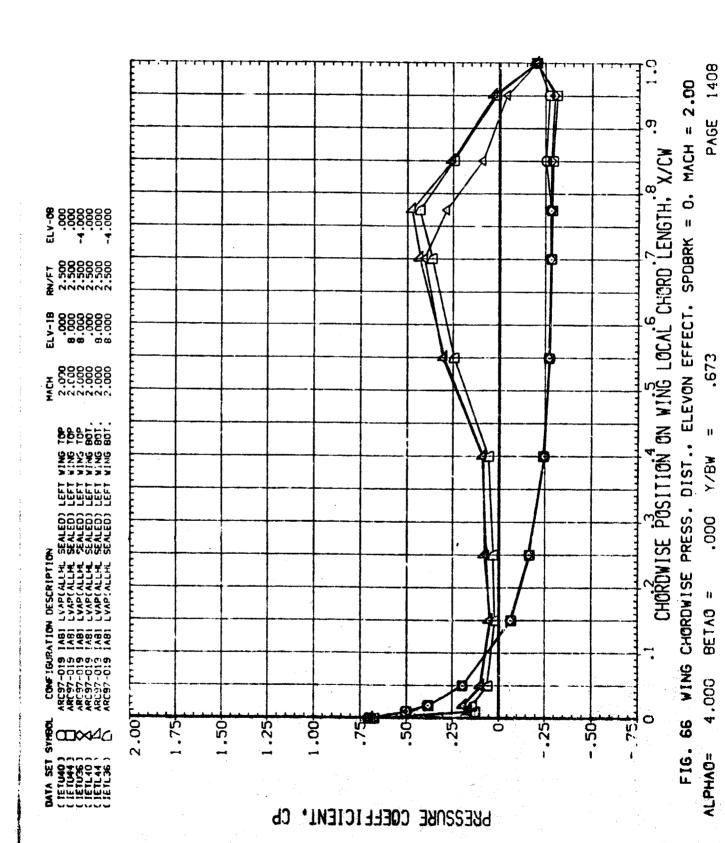


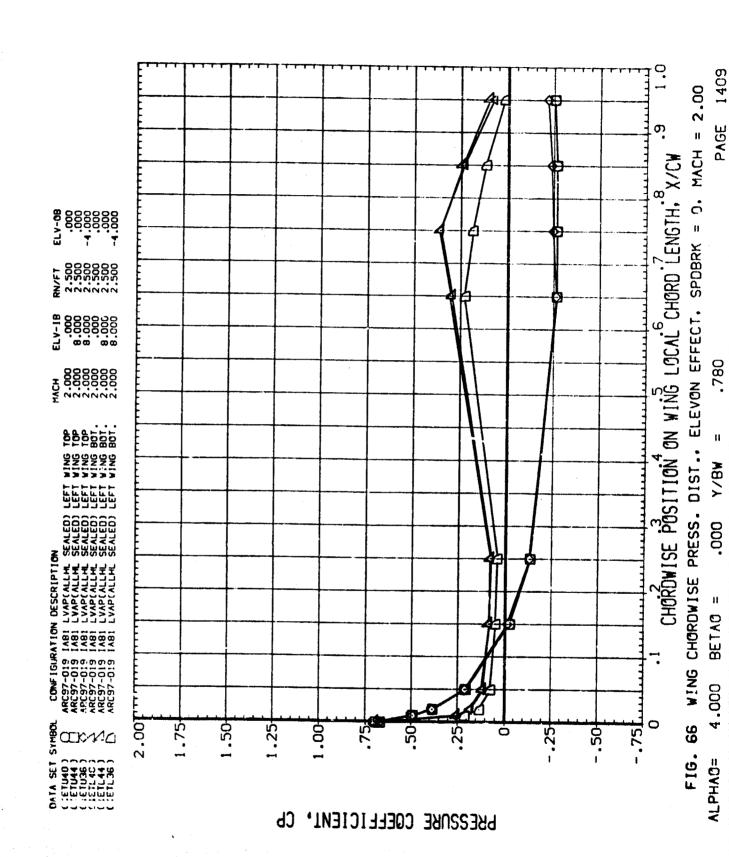


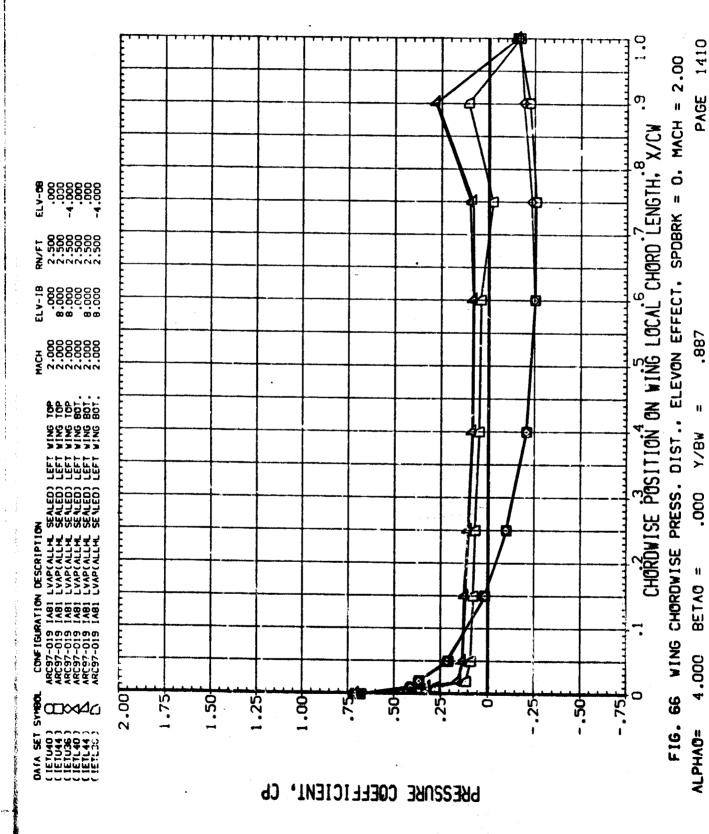
1406 FIG. 66 WING CHORDWISE PRESS. DIST., ELEVON EFFECT, SPOBRK = 0, MACH = 2.00 PAGE .300 BETAO = 4.000 ALPHAG=

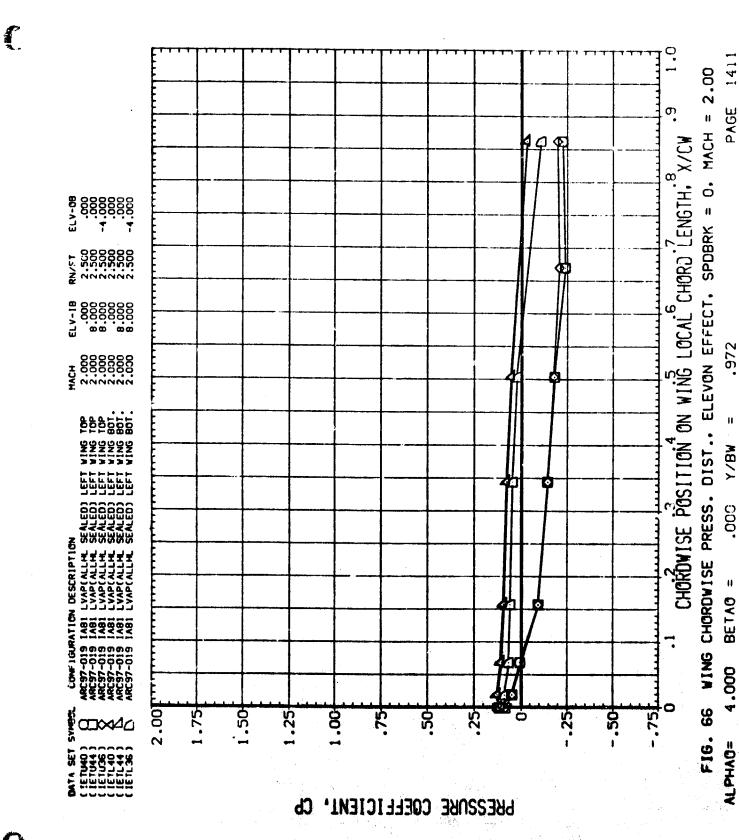


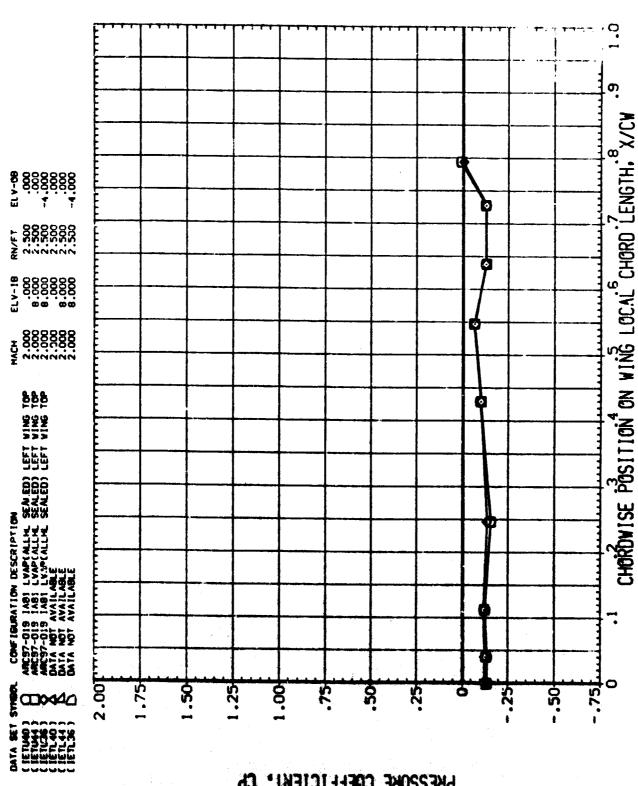
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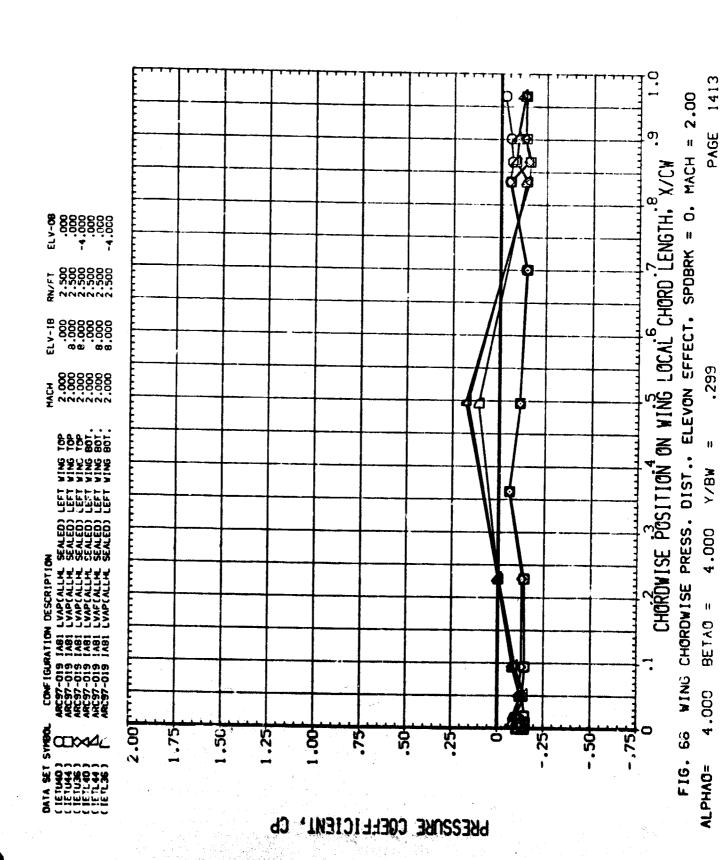
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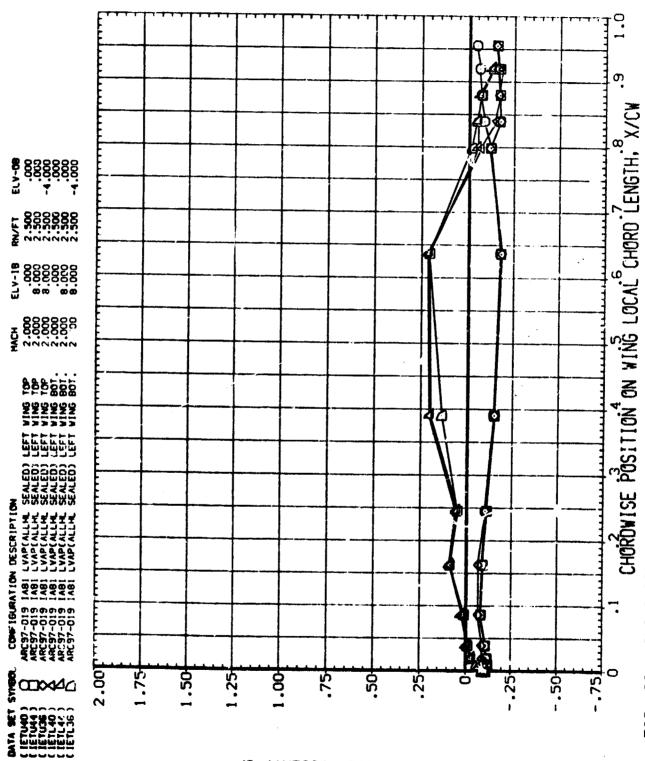
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PRESSURE COEFFICIENT, CP

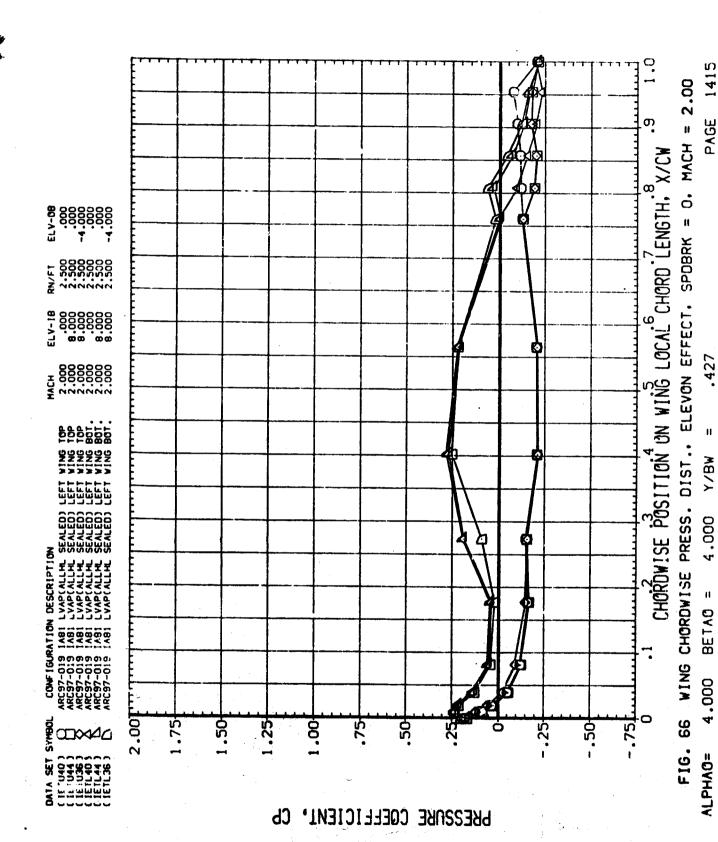


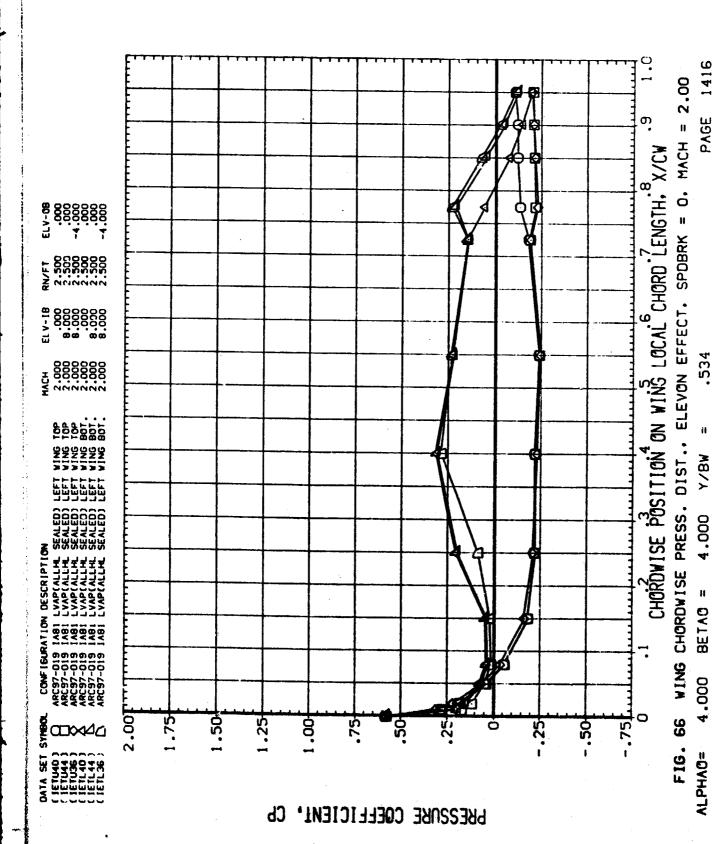


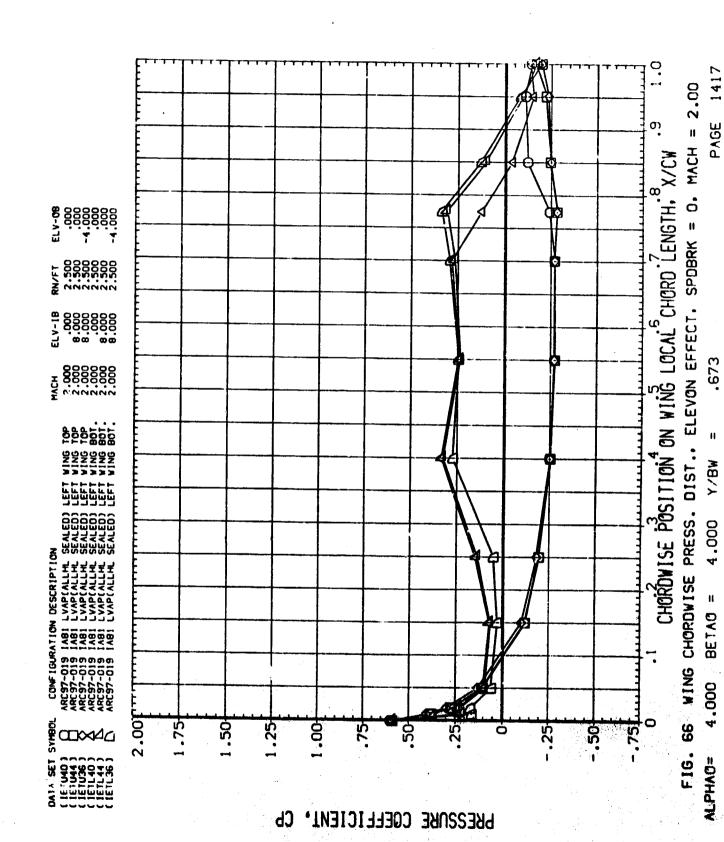
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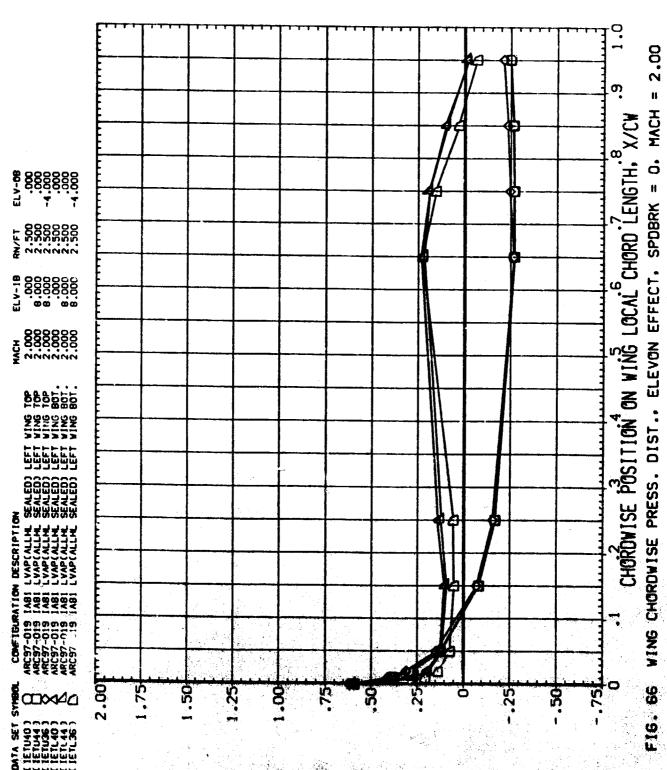
WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPDBRK = 0, MACH = 2.00 Y/8W 4.000 BETAG = 4.000 F1G. 66 ALPHAG=

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PAGE 1418

Y/BW

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PRESSURE COEFFICIENT, CP

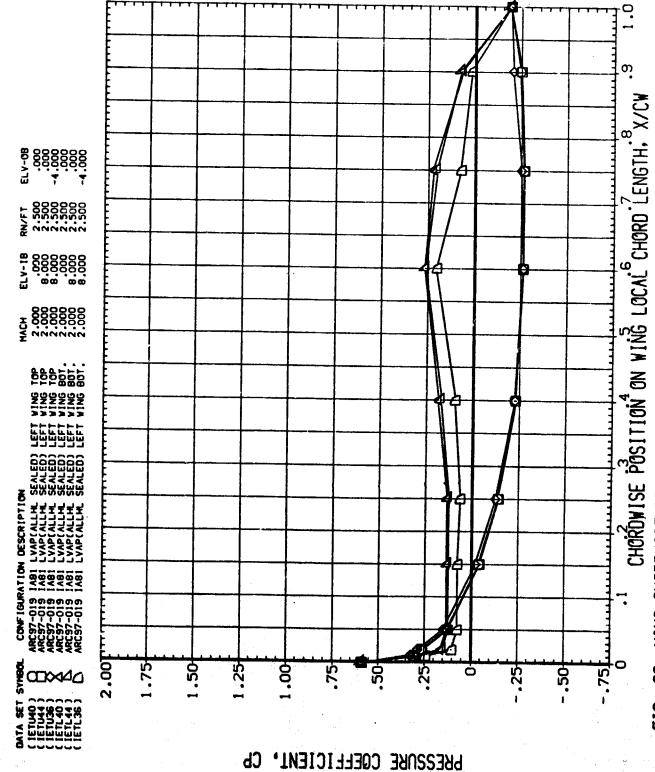
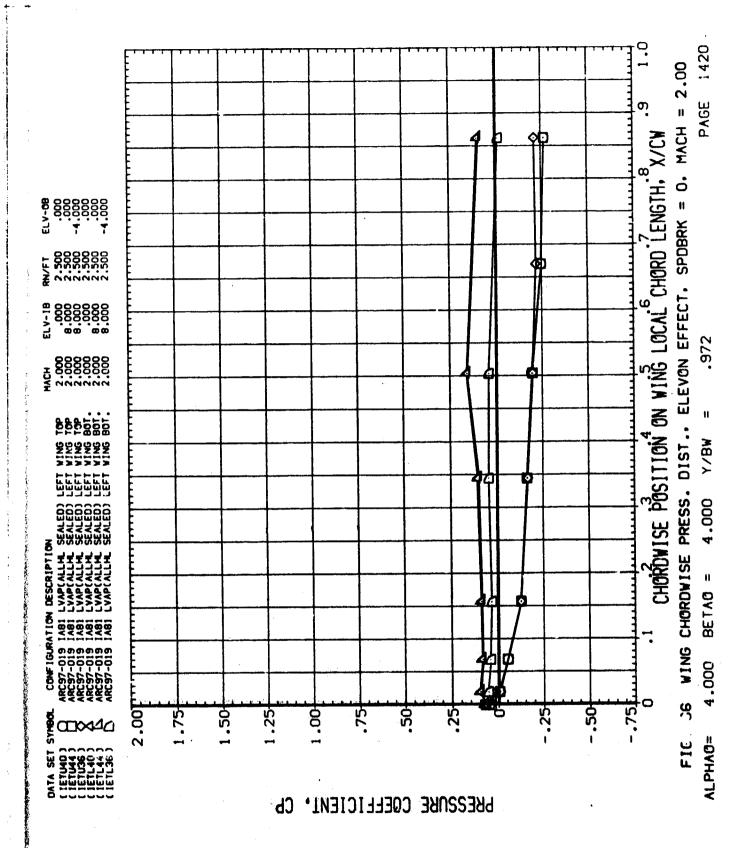
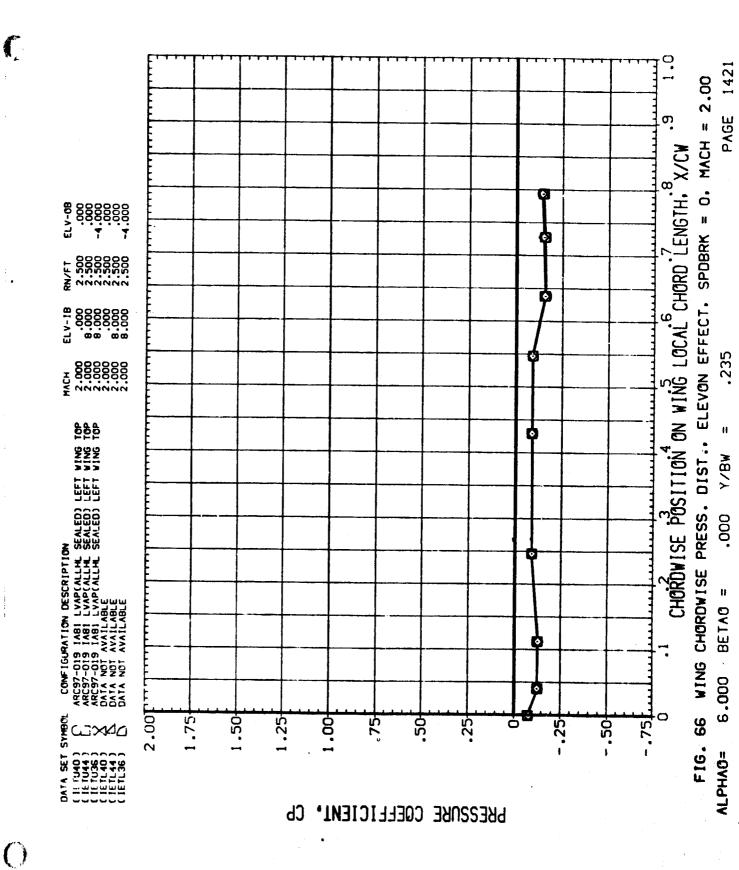
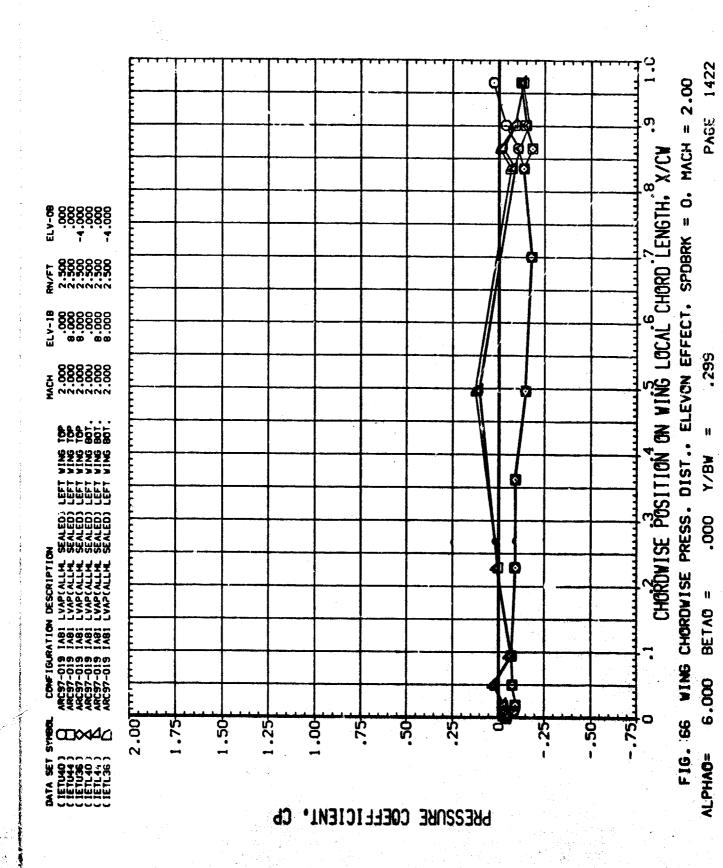


FIG. 66 WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPOBRK = 0, MACH = 2.00 11 Y/BW 4.000 H BETAO 4.000 ALPHAG=

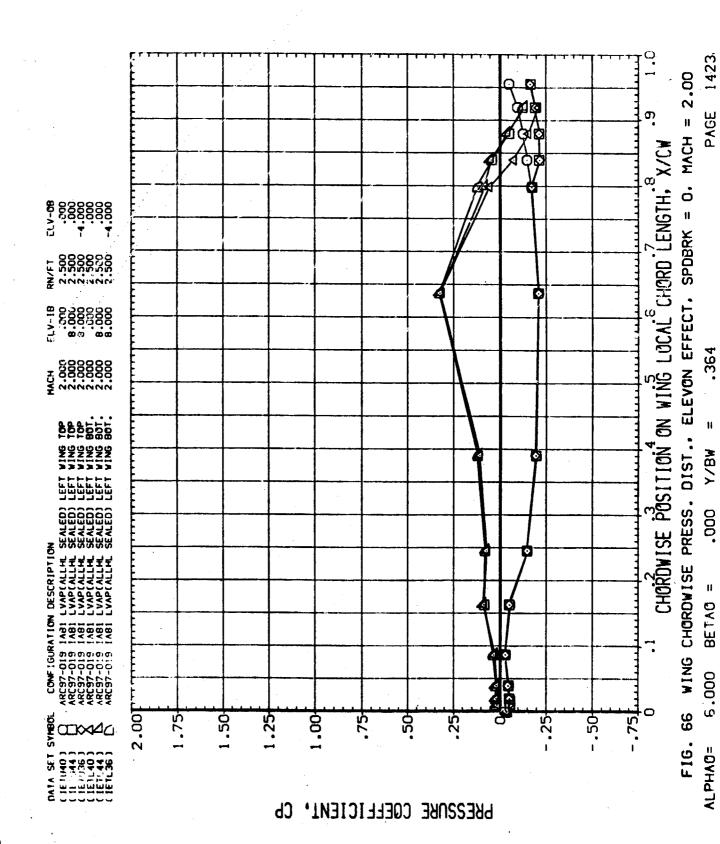
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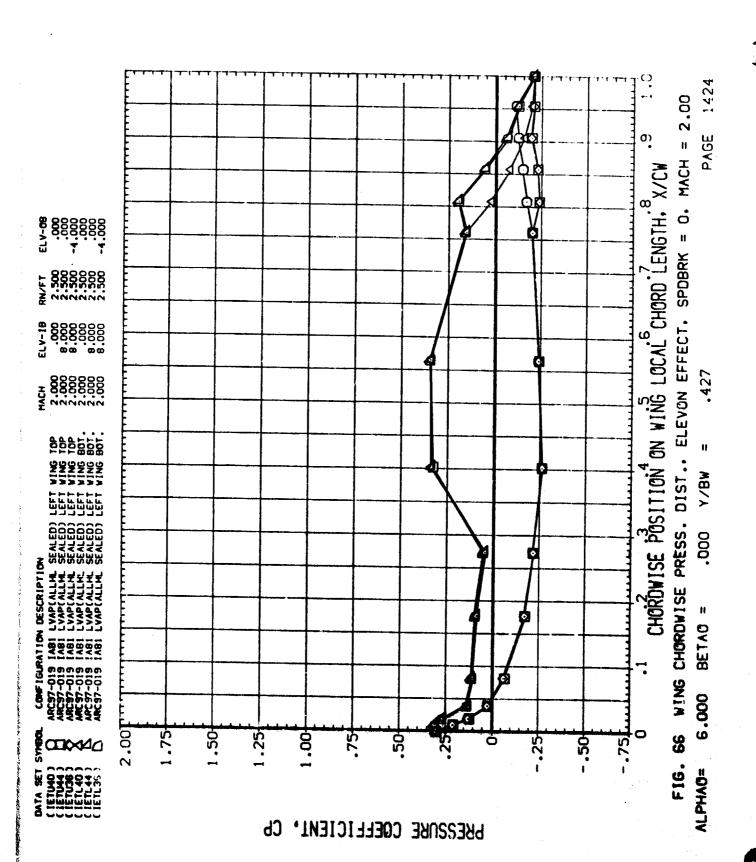


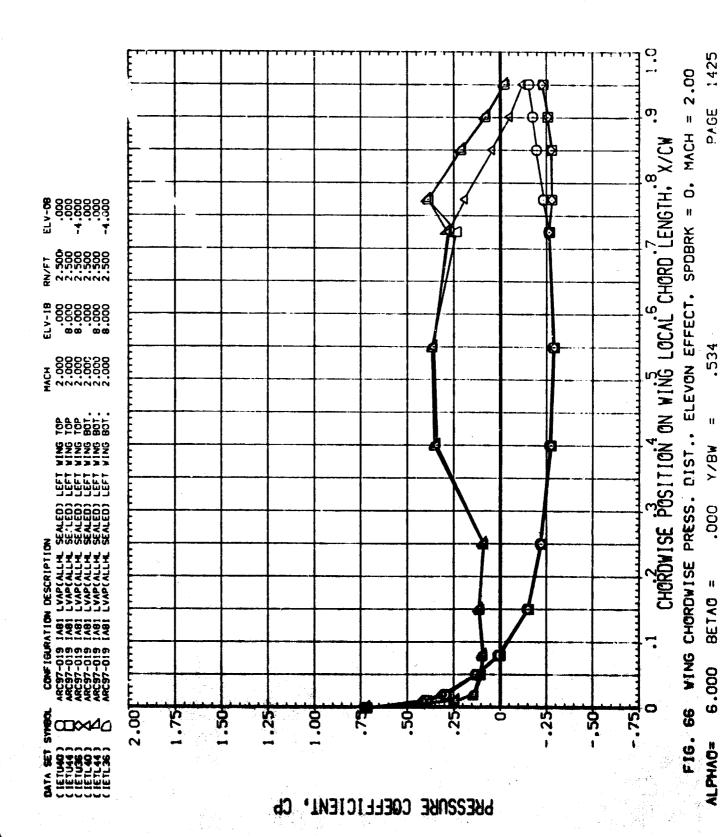


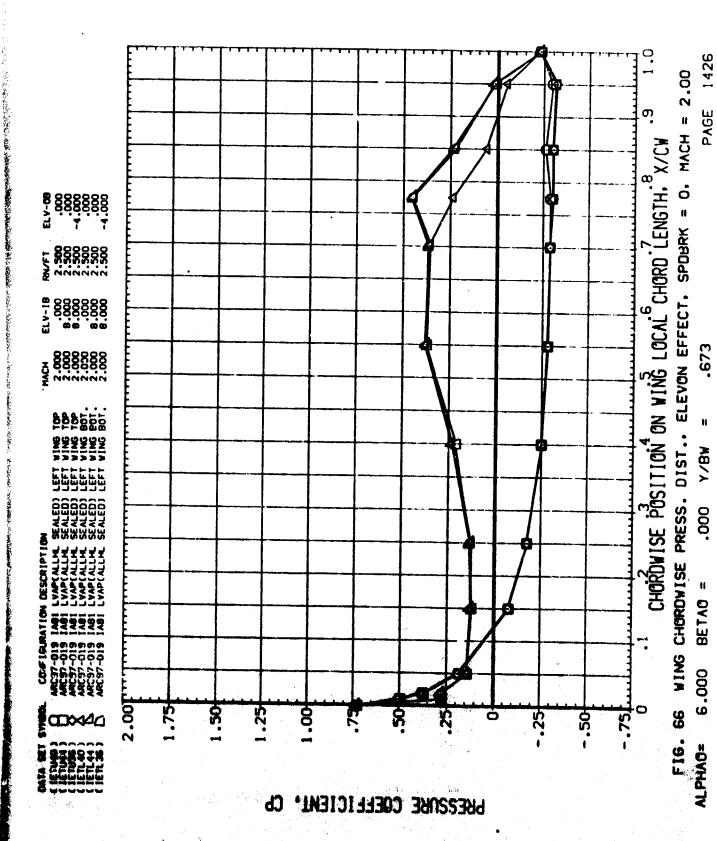


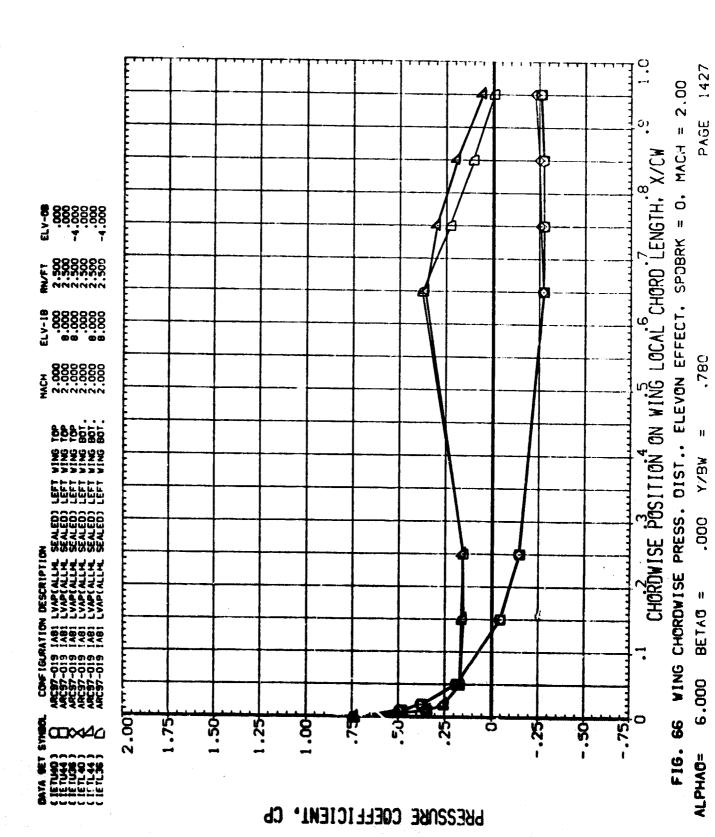
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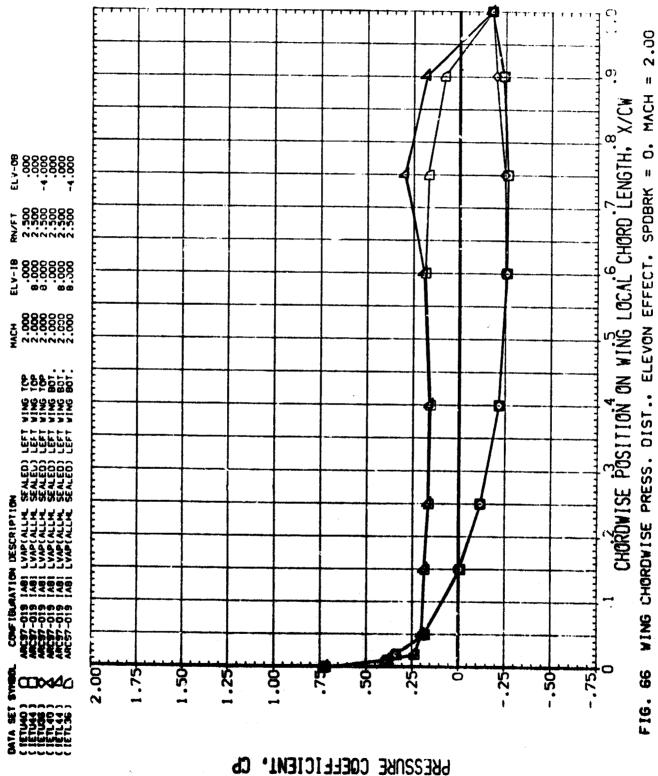










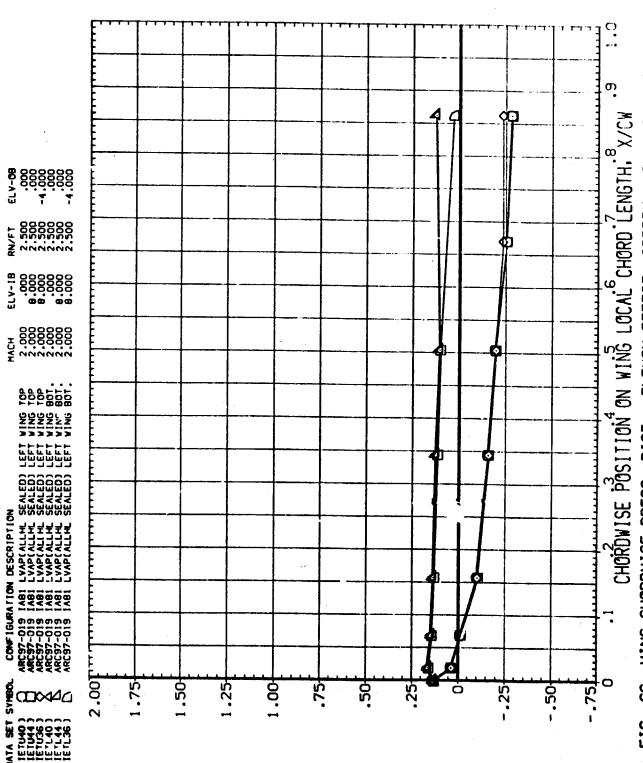


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PAGE 1423

Y/BW

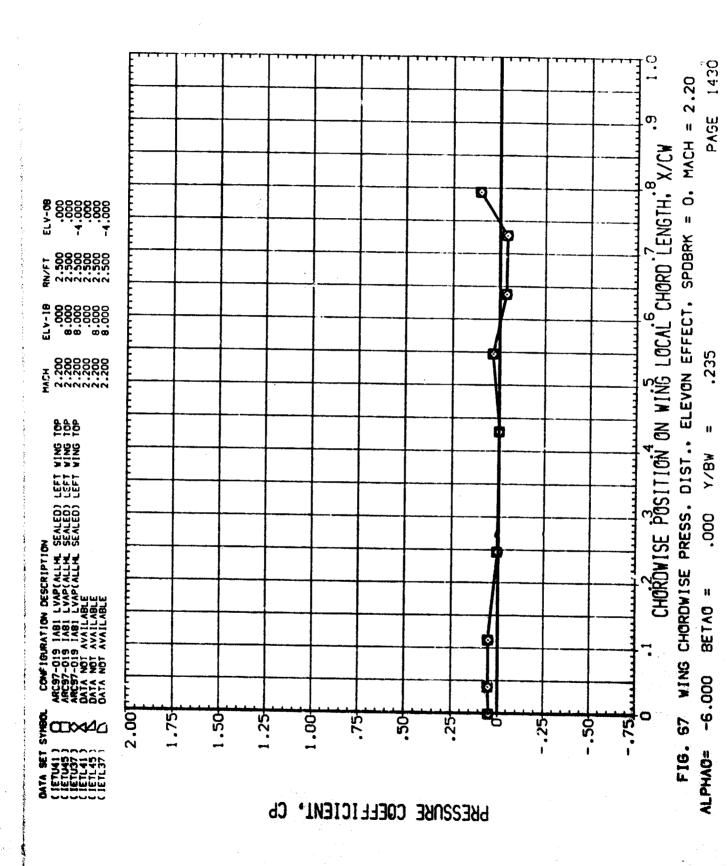
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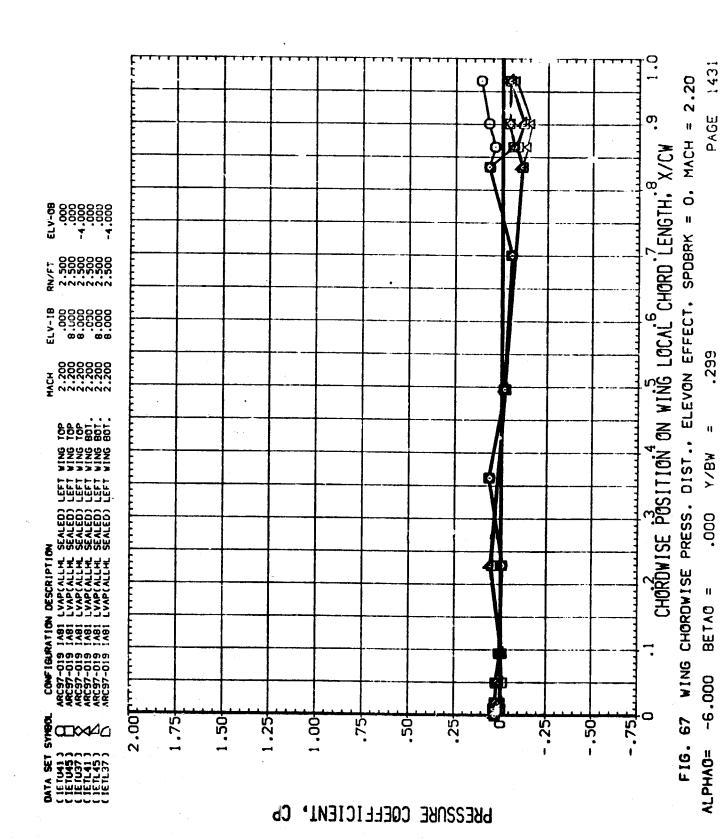


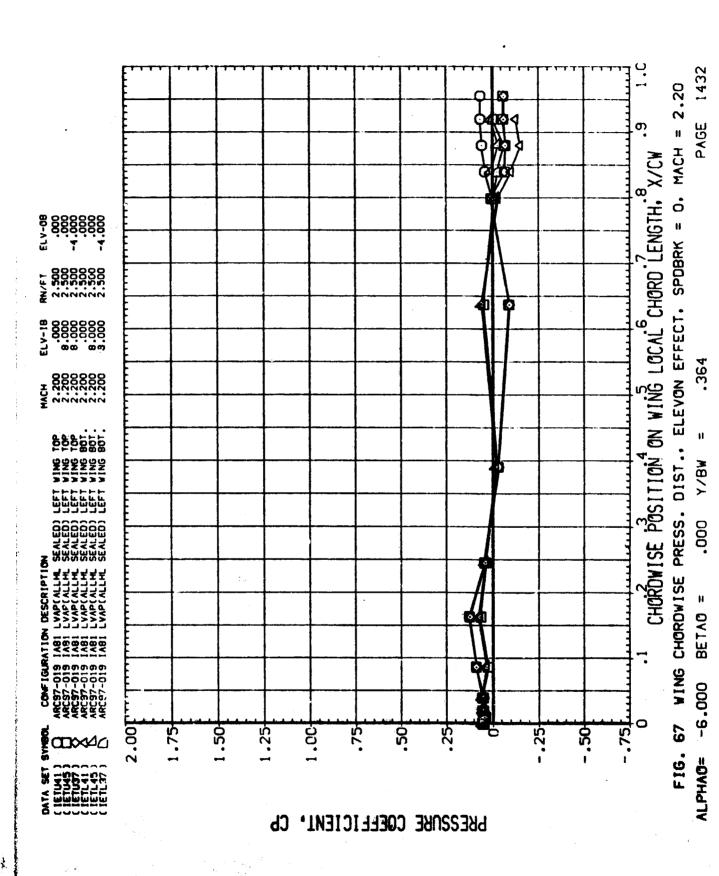
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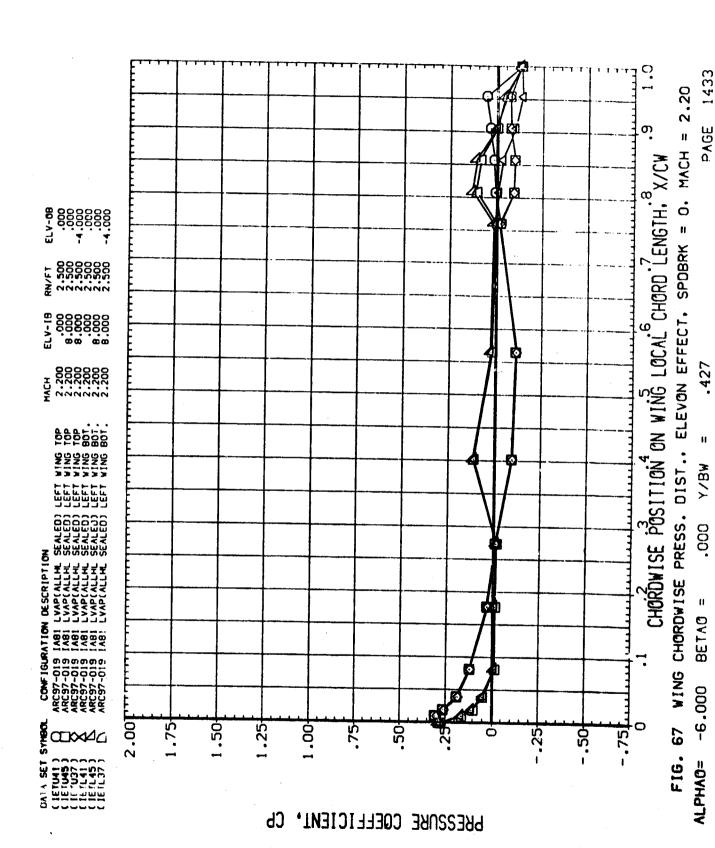
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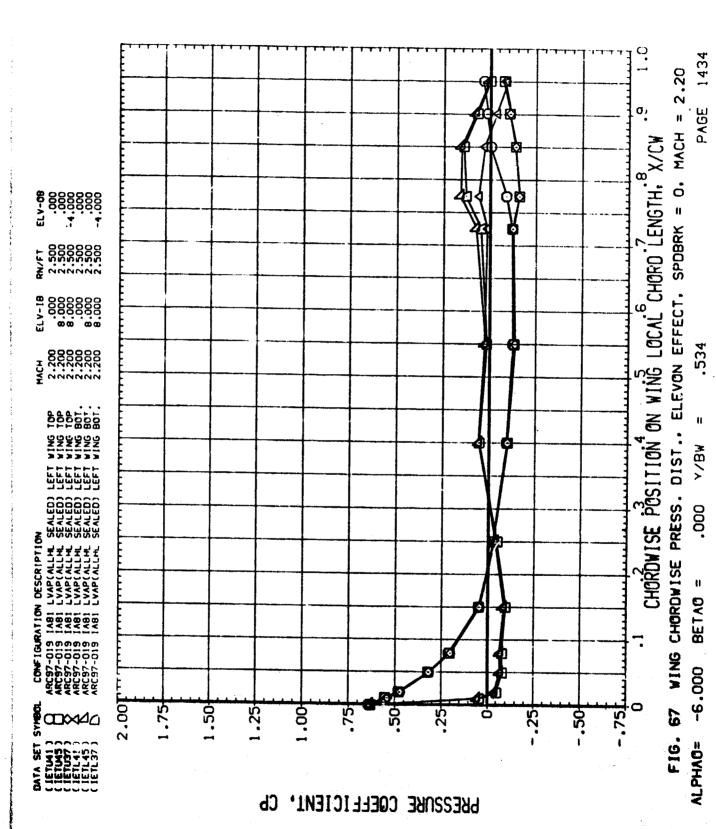
FIG. 66 WING CHORDWISE PRESS. DIST., ELEVON EFFECT, SPOBRK = 0, MACH = 2.00 PAGE Y/BW 000 BETAO 6.000 ALPHA0=

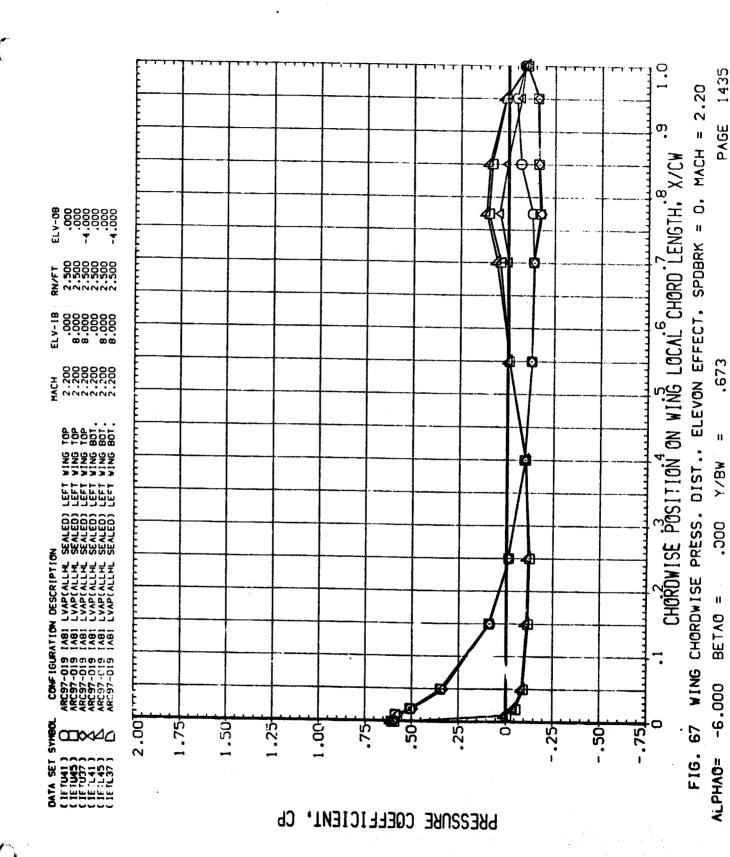


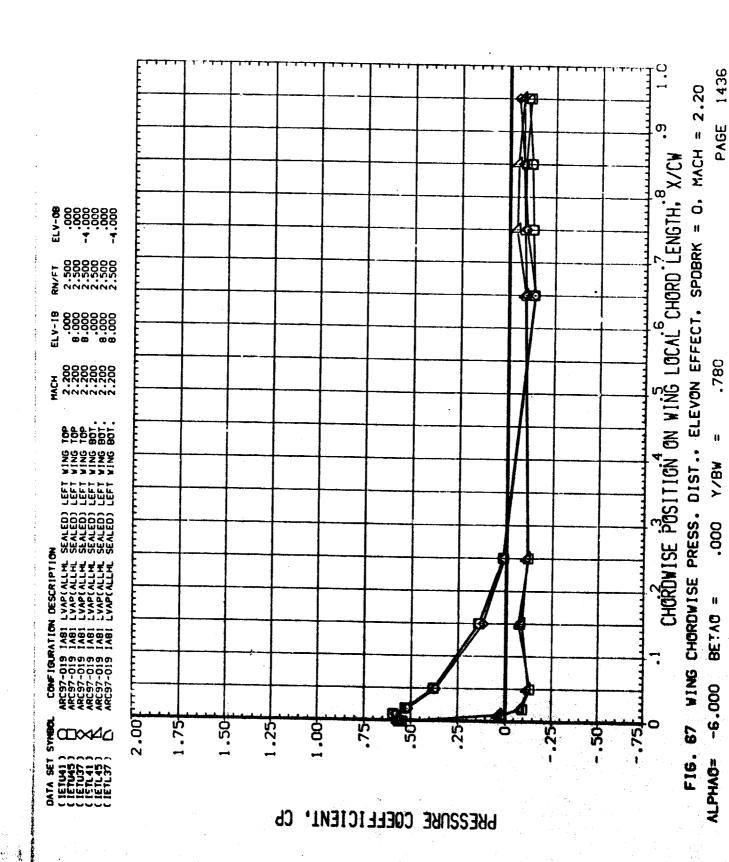


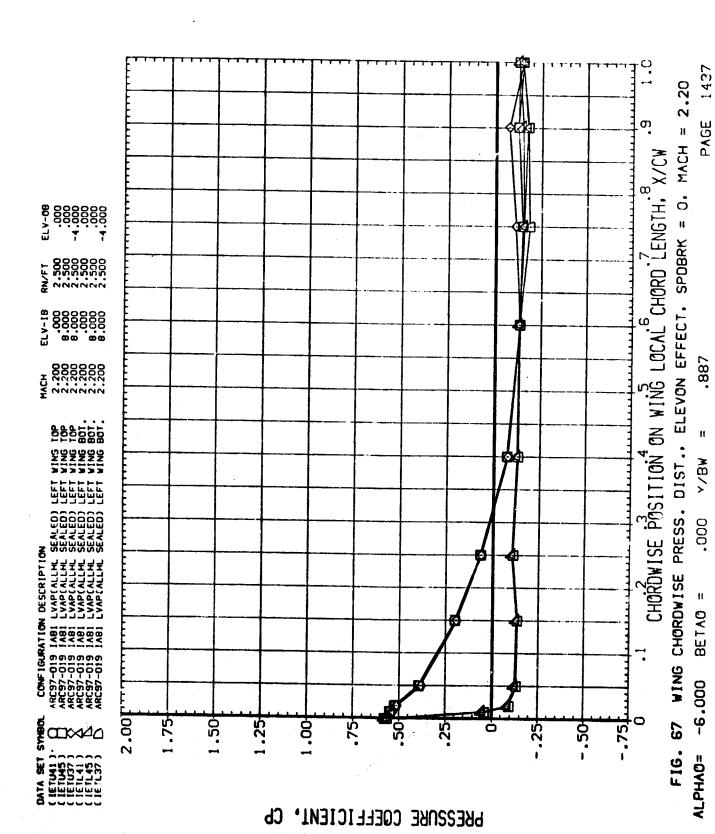












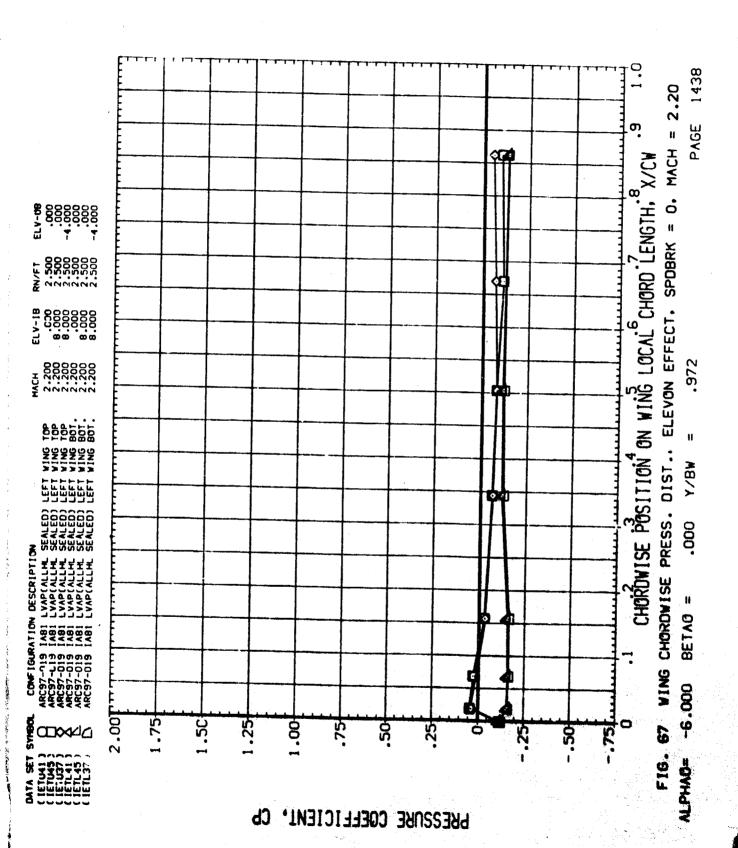


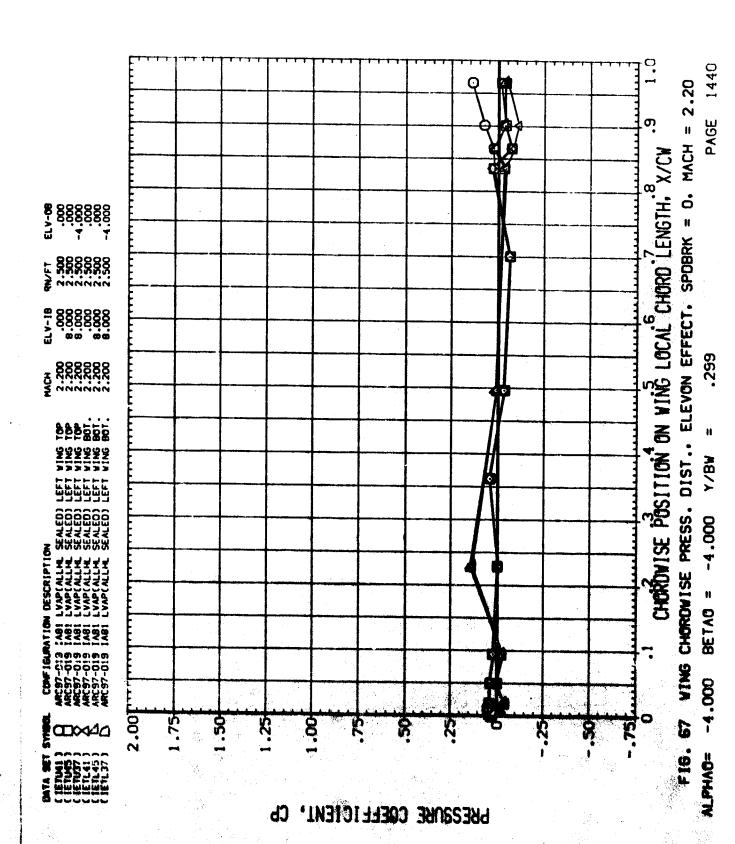
FIG. 67 WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPDBRK = 0, MACH = 2.20

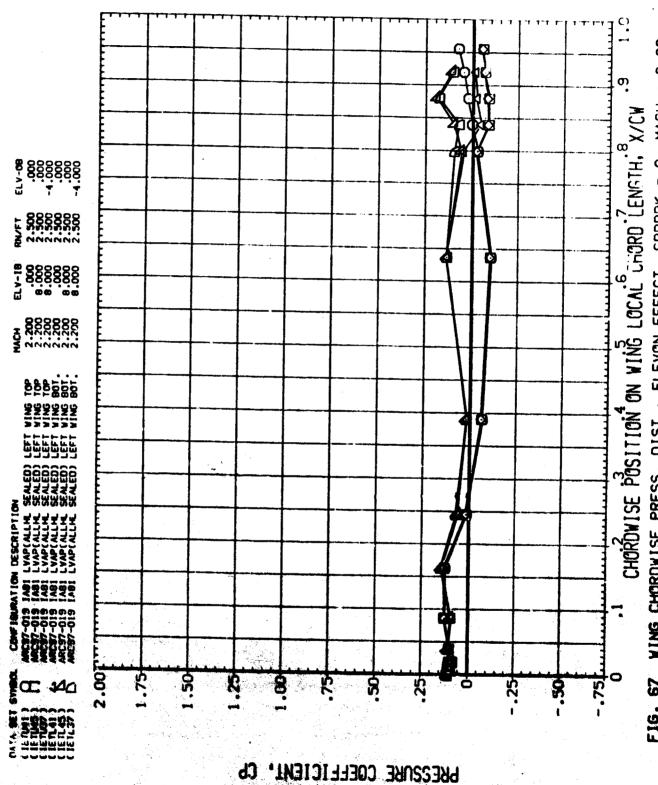
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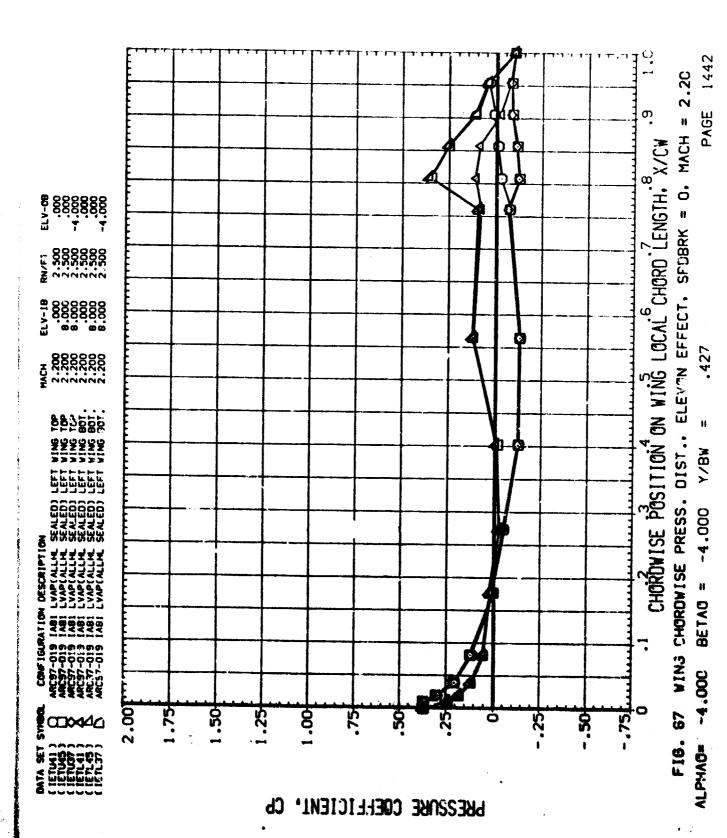
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PAGE 1441 FIG. 67 WING CHORDWISE PRESS. DIST., ELEVON EFFECT, SPOBRK = 0, MACH = 2.20 -4.000 BETAG = ALPHAD= -4.000



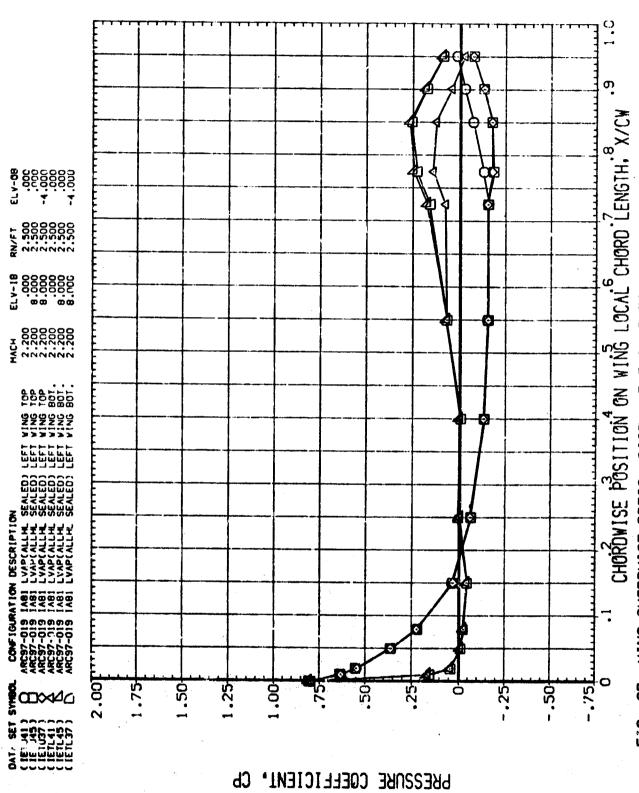


FIG. 67 WING CHORDWISE PRESS. DIST., ELEVON EFFECT, SPDBRK = 0, MACH = 2.20

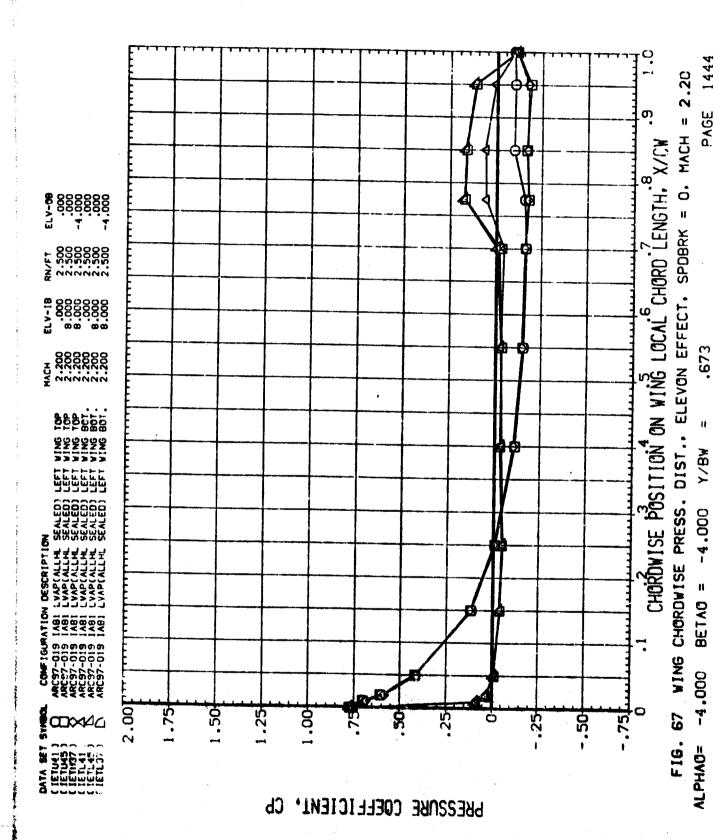
Y/BW

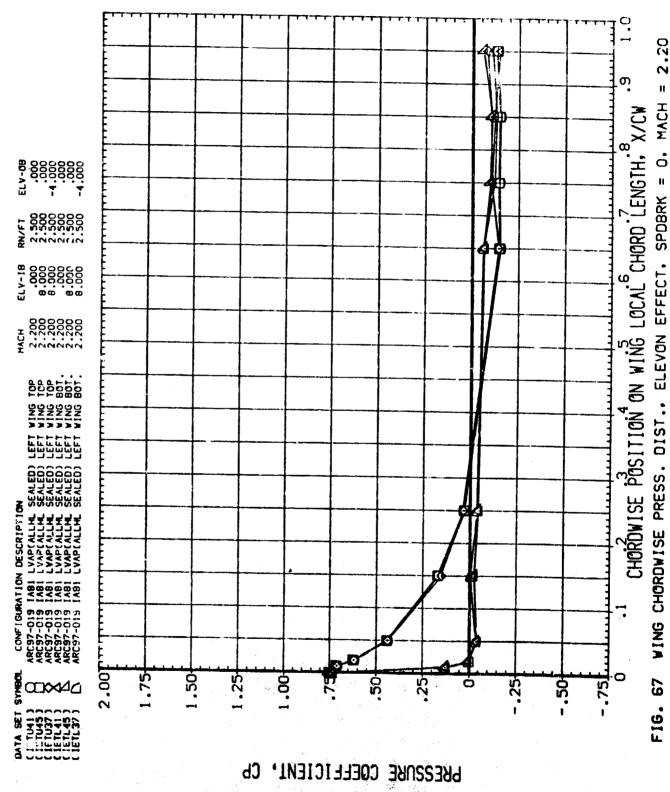
-4.000

BETAG =

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WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPDBRK = 0. FIG. 67 ALPHAG=

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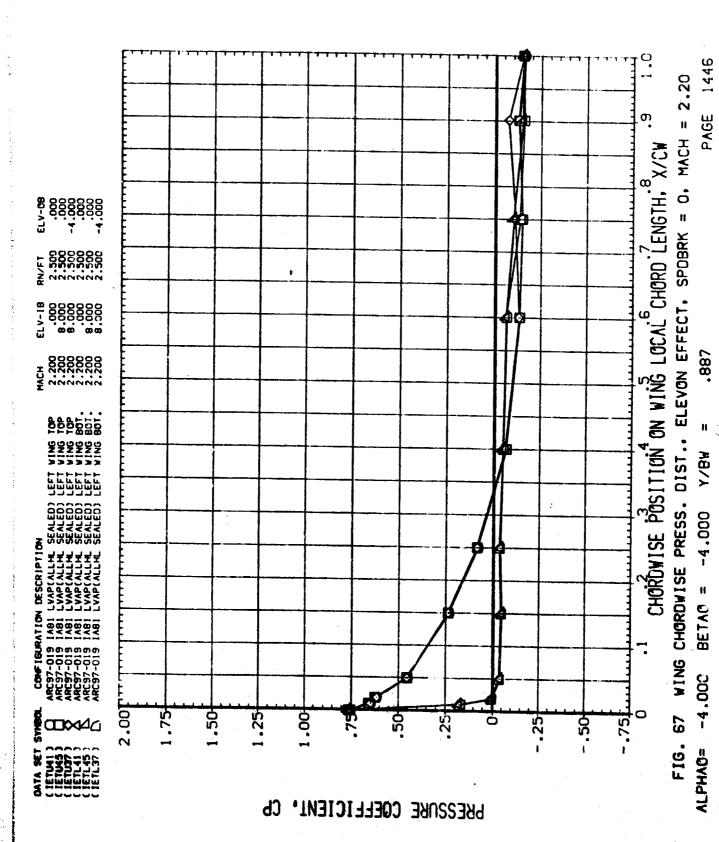
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Y/BW

-4.000

BETAO =

-4.000



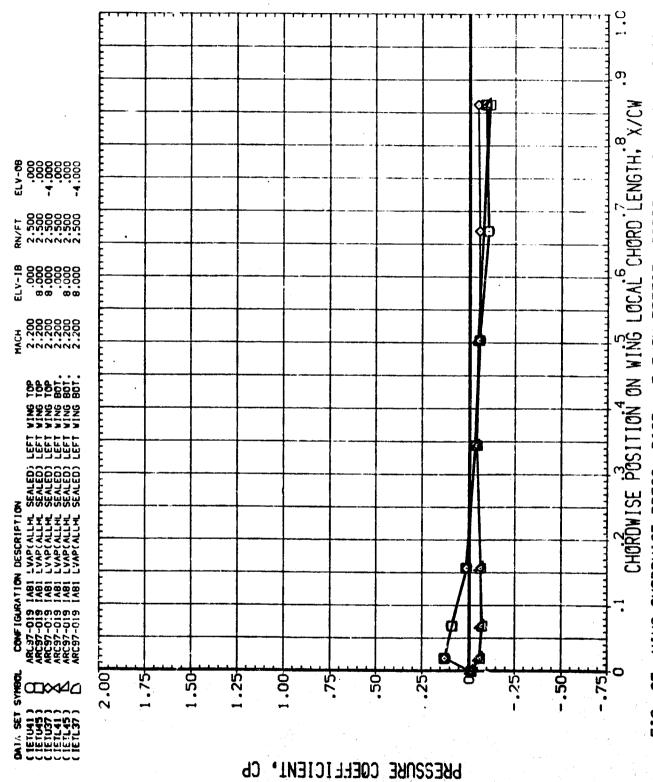


FIG. 67 WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPOBRK = 0, MACH = 2.20

ALPHAG= -4.000 BETAG = -4.000 Y/BW

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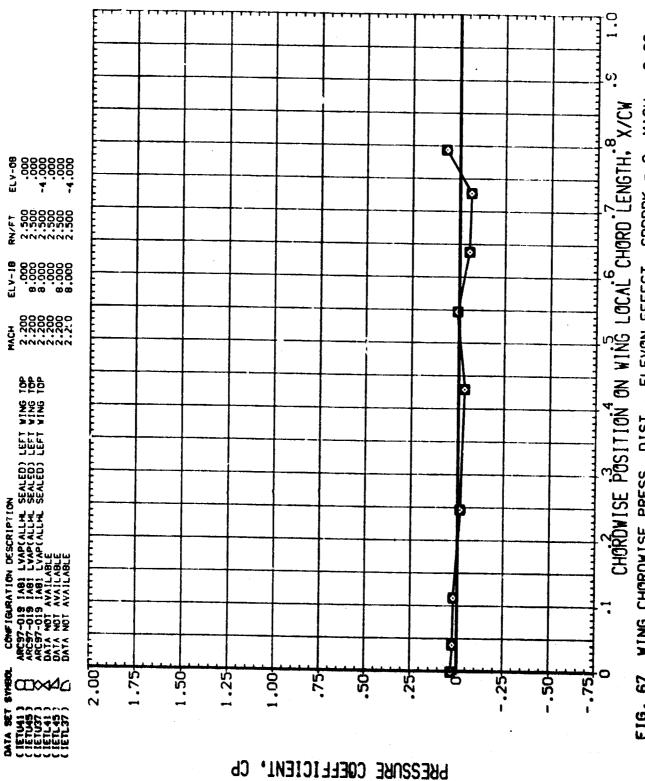
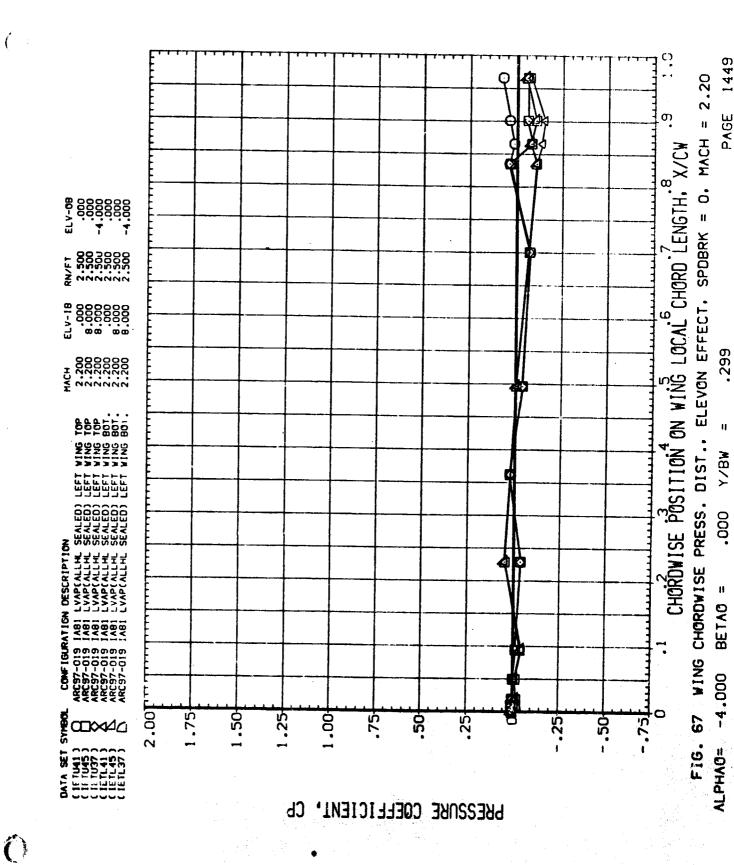
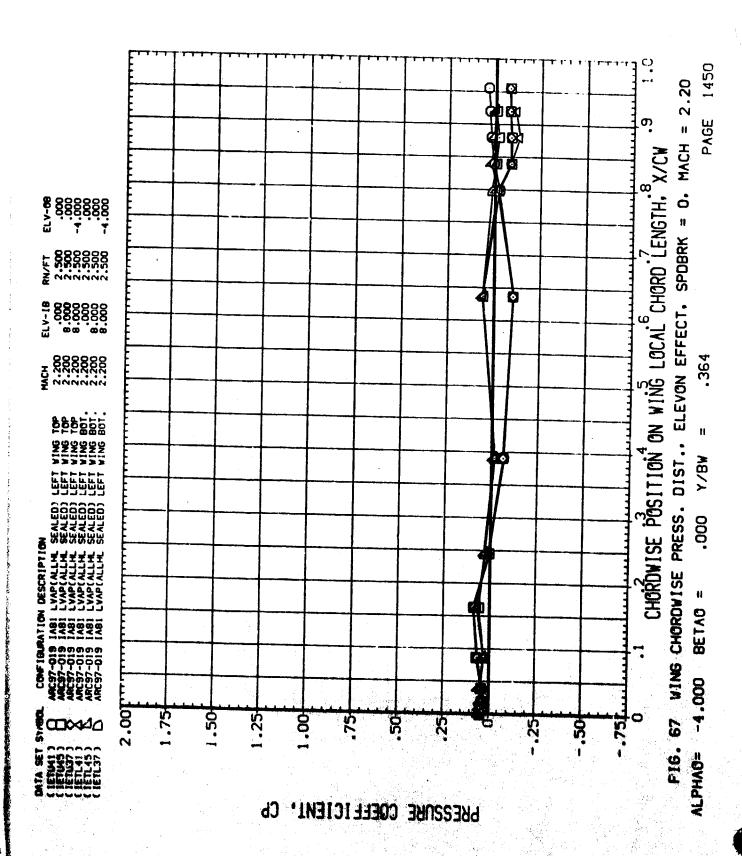


FIG. 67 WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPOBRK = 0. MACH = 2.20 Y/BW 000. BETAO = -4.000 ALPHAG=

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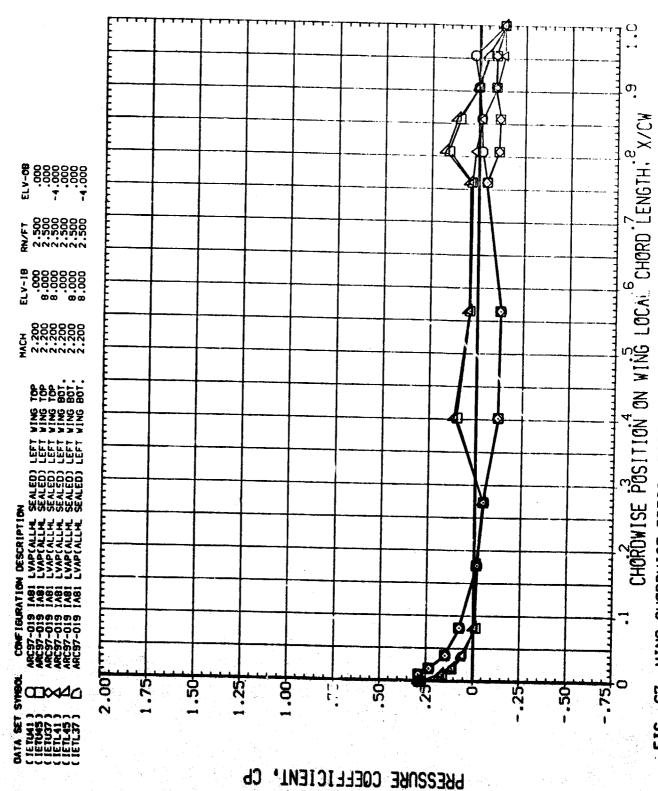
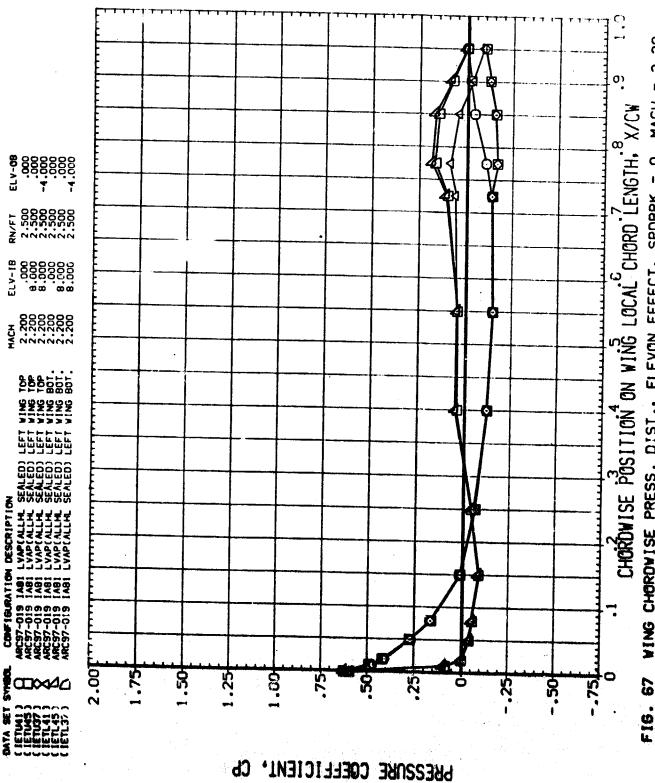
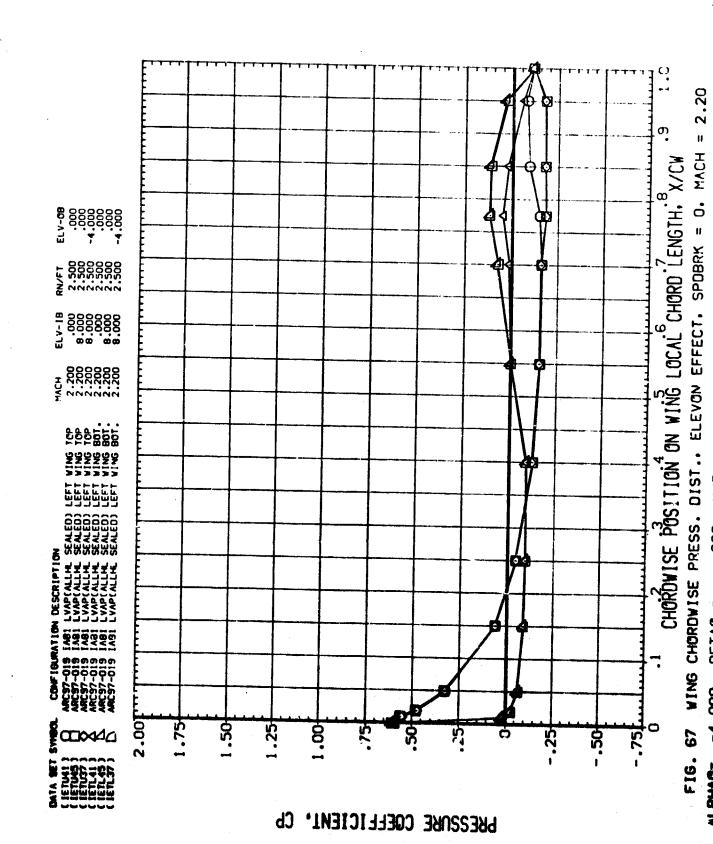


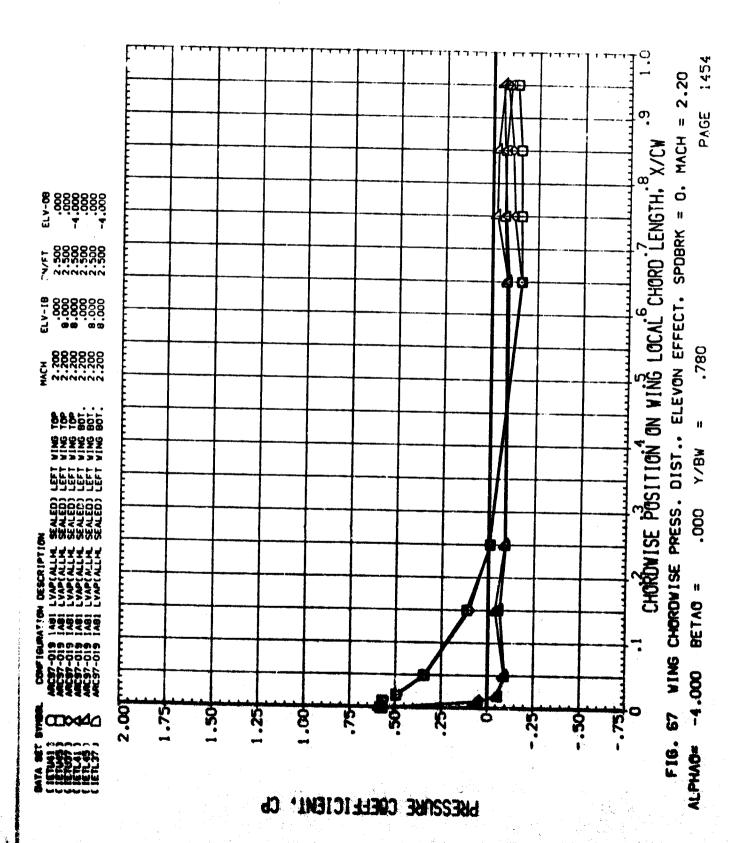
FIG. 67 WING CHORDWISE PRESS. DIST., ELEVON EFFECT, SPDBRK = 0. Y/B\ .000 BETAG ALPHA0= -4.000

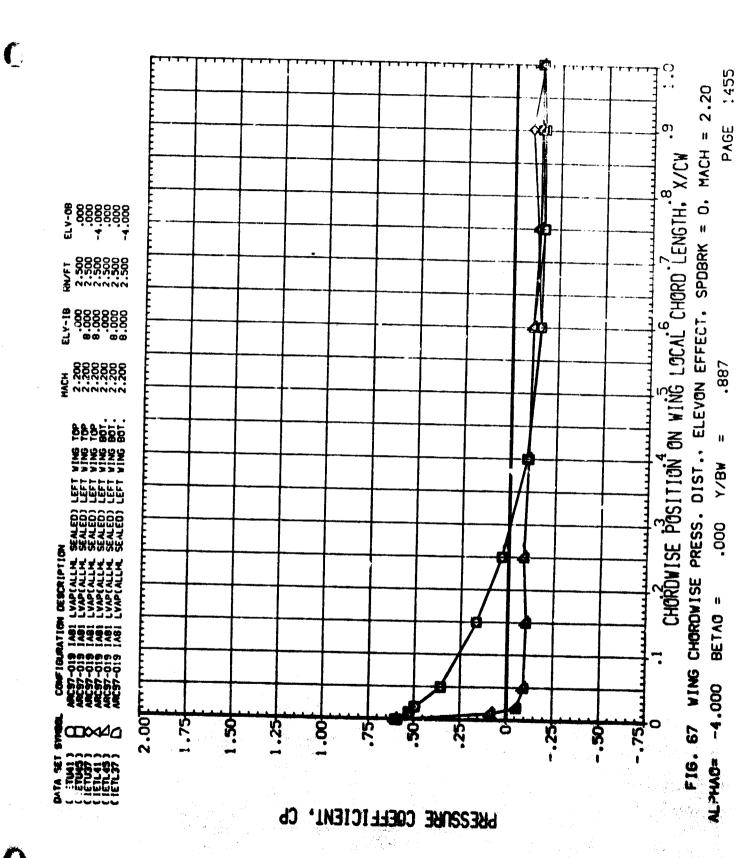


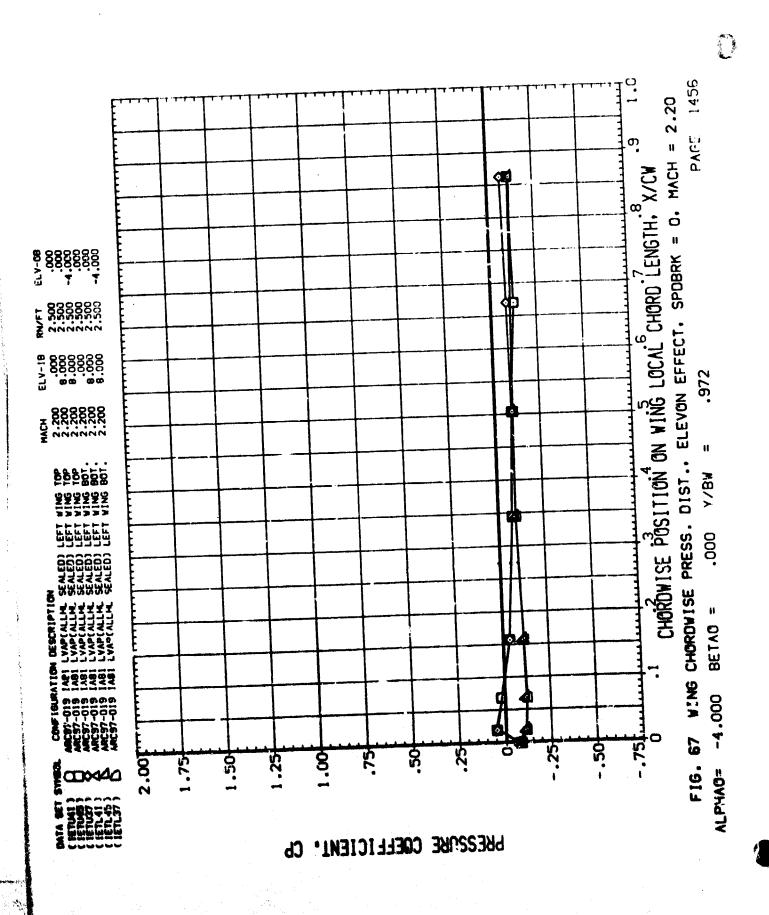
WING CHORDWISE PRESS. DIST. ELEVON EFFECT, SPOBRK = 0, MACH = 2.20 .534 Y/BW 000. BETAO -4.000 ALPHAD=

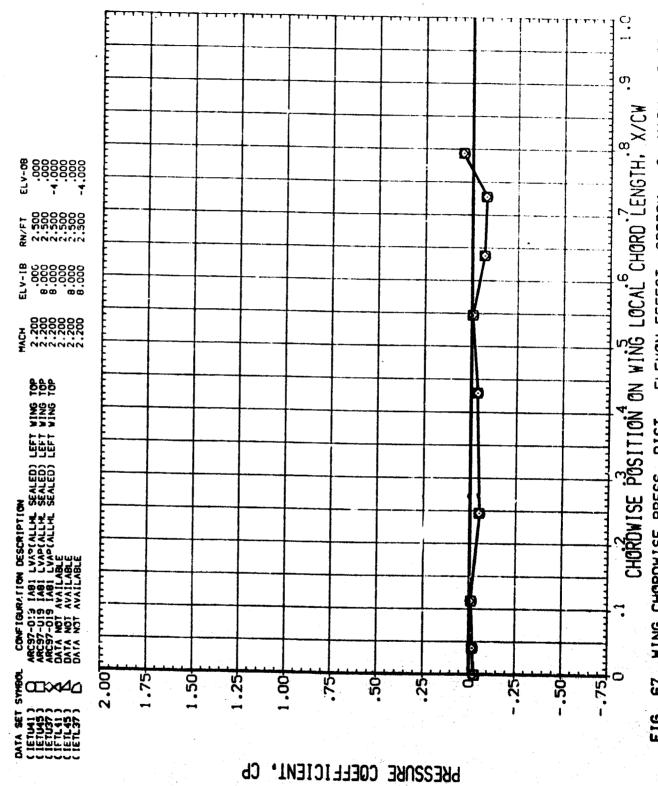
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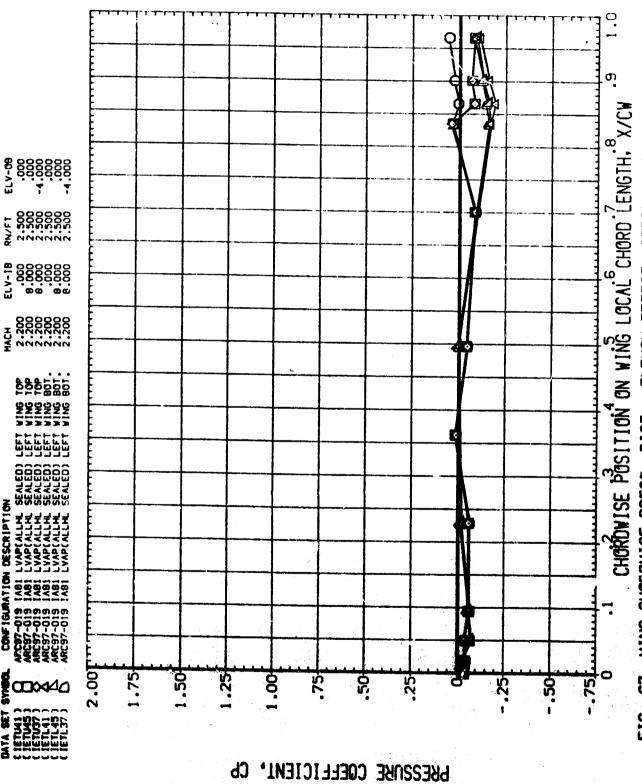




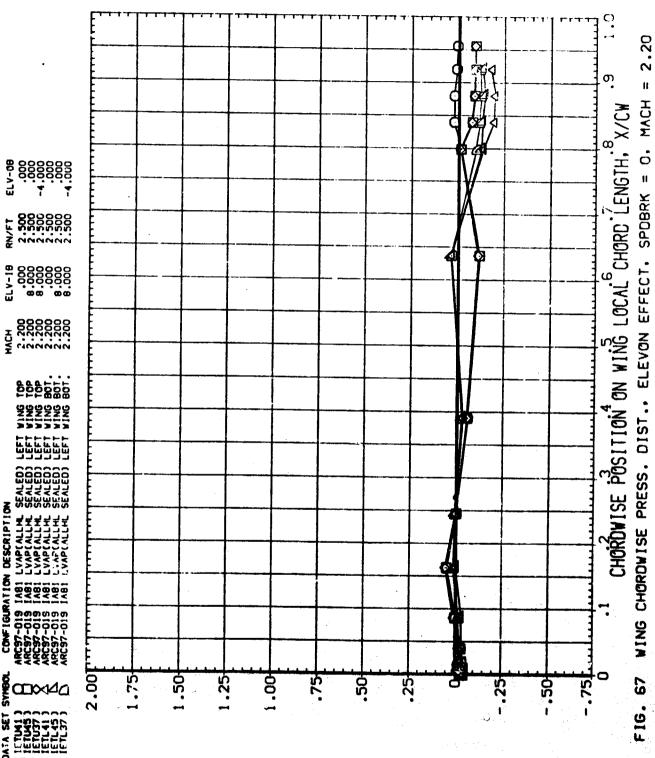


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PAGE 1457 FIG. 67 WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPOBRK = 0. MACH = 2.20 Y/BW 4.000 BETAO = -4.000 ALPHA0=



MACH = 2.20PAGE FIG. 67 WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPOBRK = 0, 4.000 BETAG = -4.000 ALPHAG=



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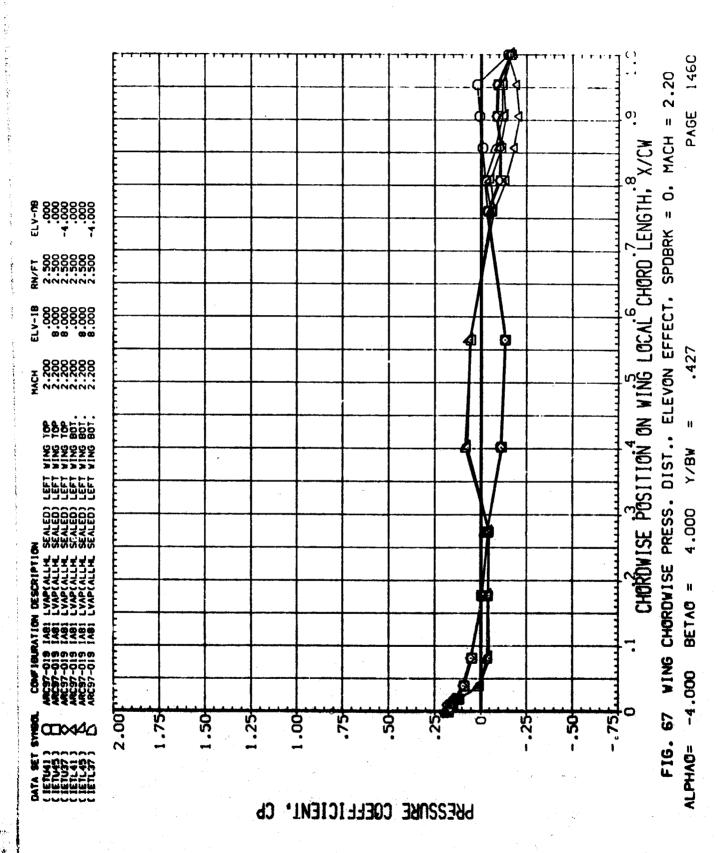
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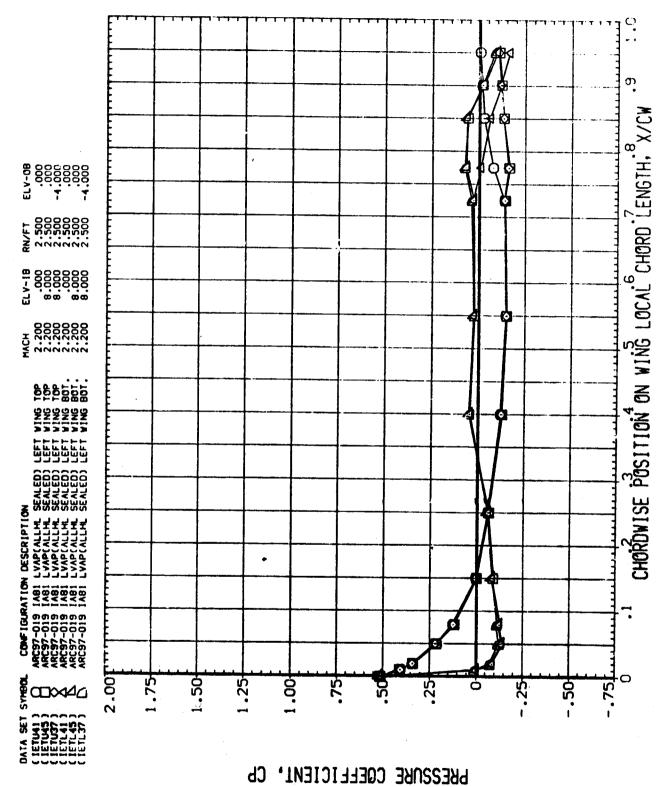
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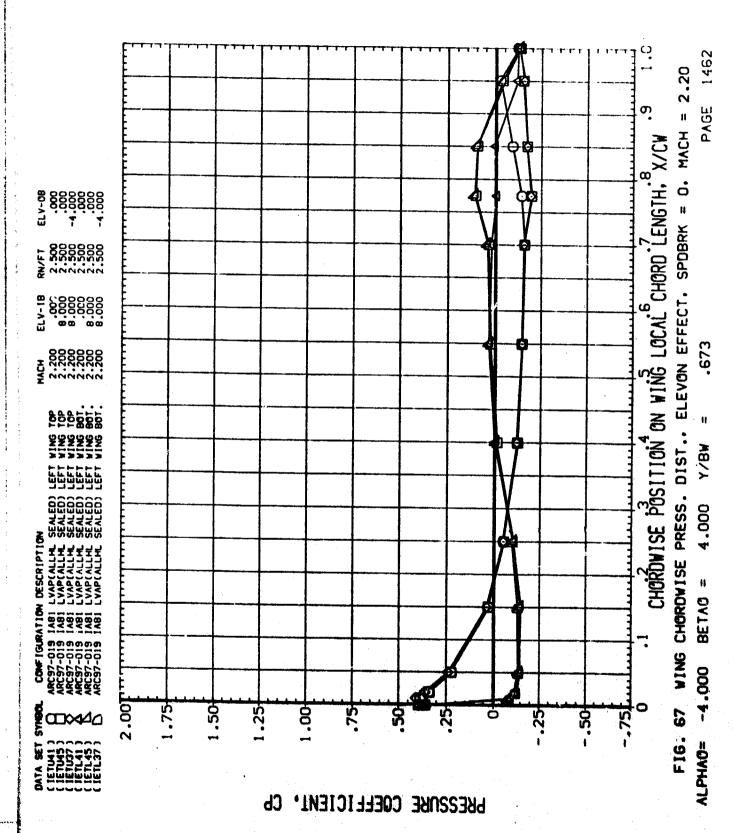


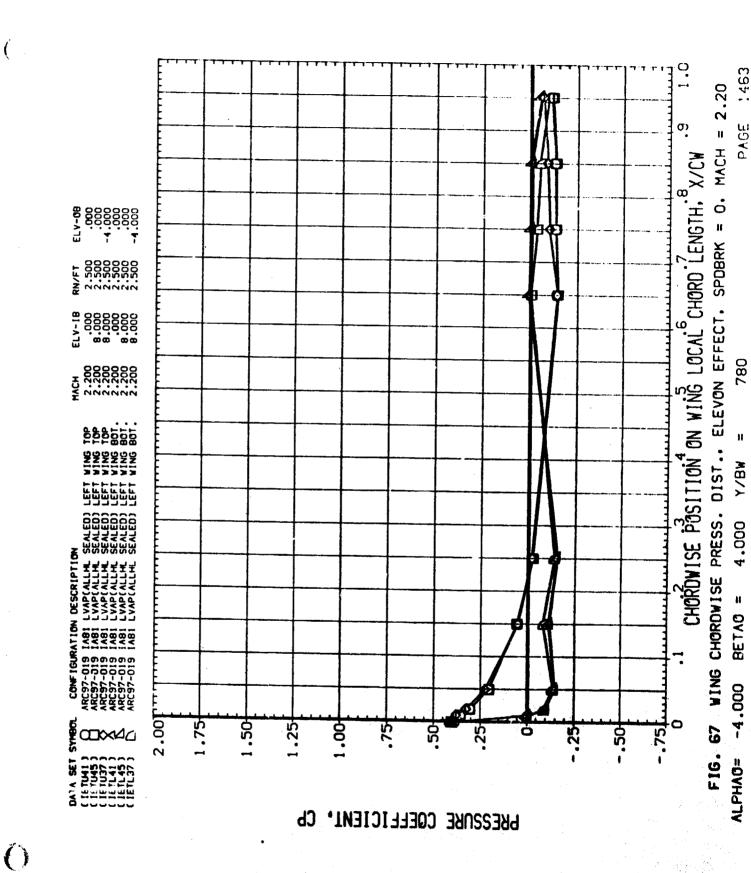
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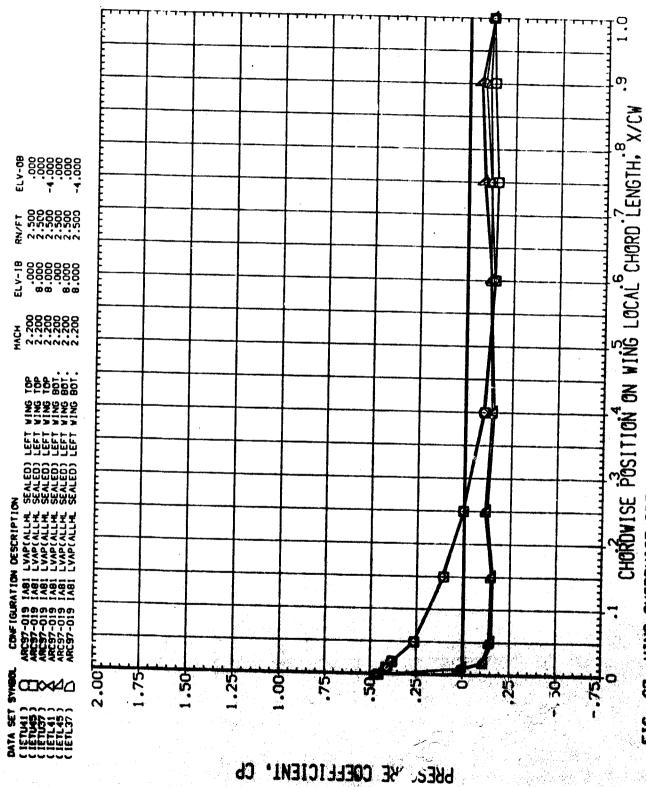
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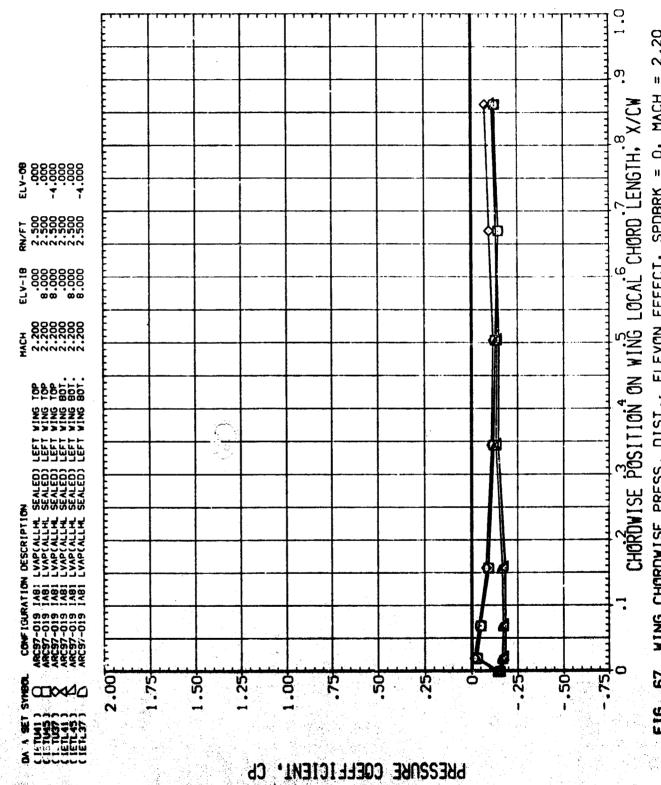
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WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPDBRK = 0. MACH = 2.20 PAGE Y/BW 4.000 F16. 67



WING CHORDWISE PRESS. DIST., ELEVON EFFECT, SPDBRK = 0, MACH = 2.20 Y/BW F16. 67

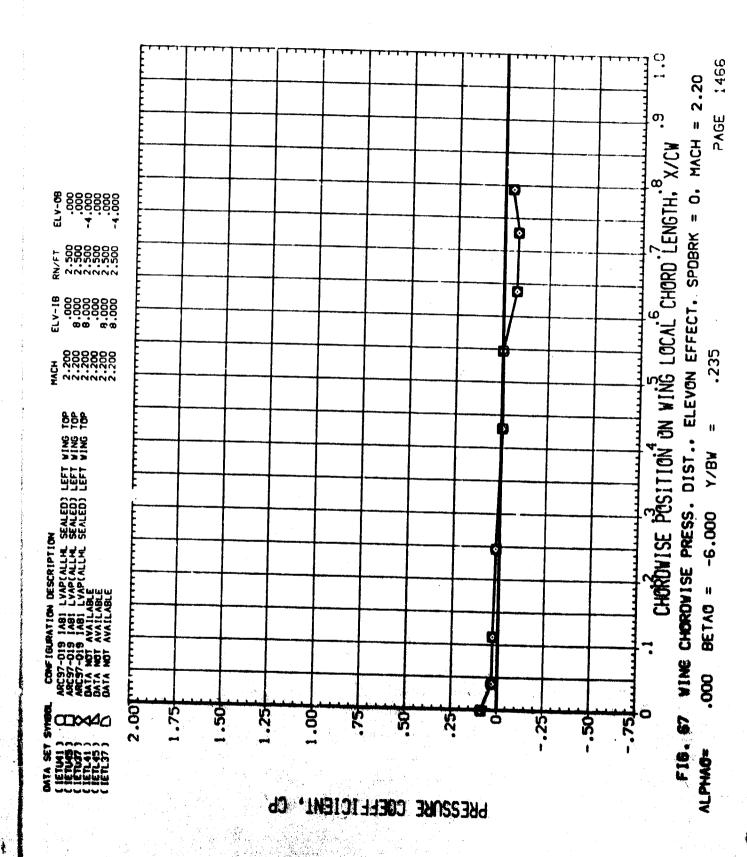
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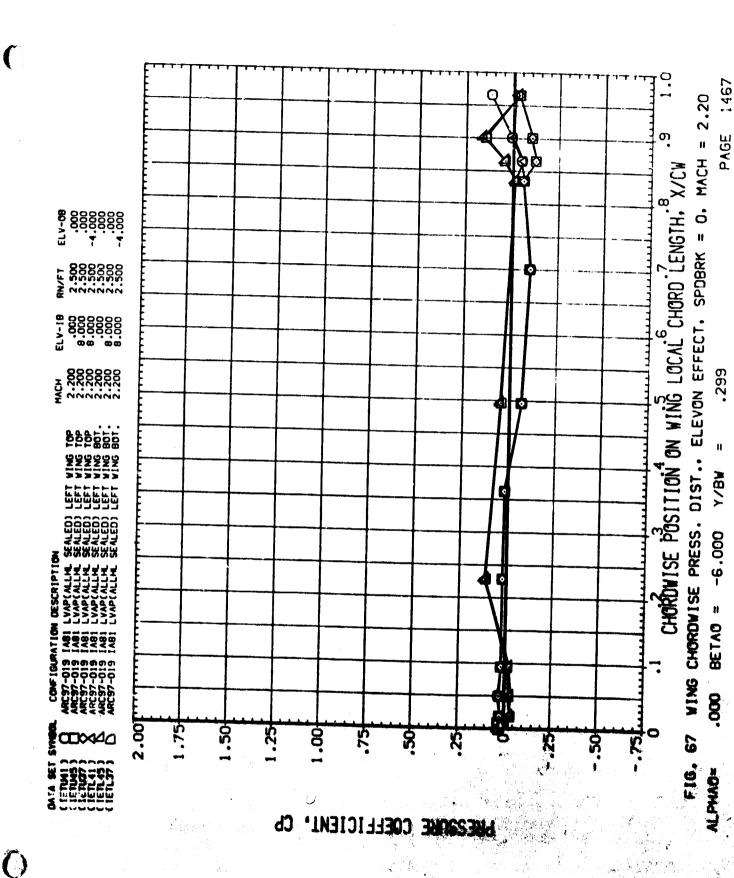
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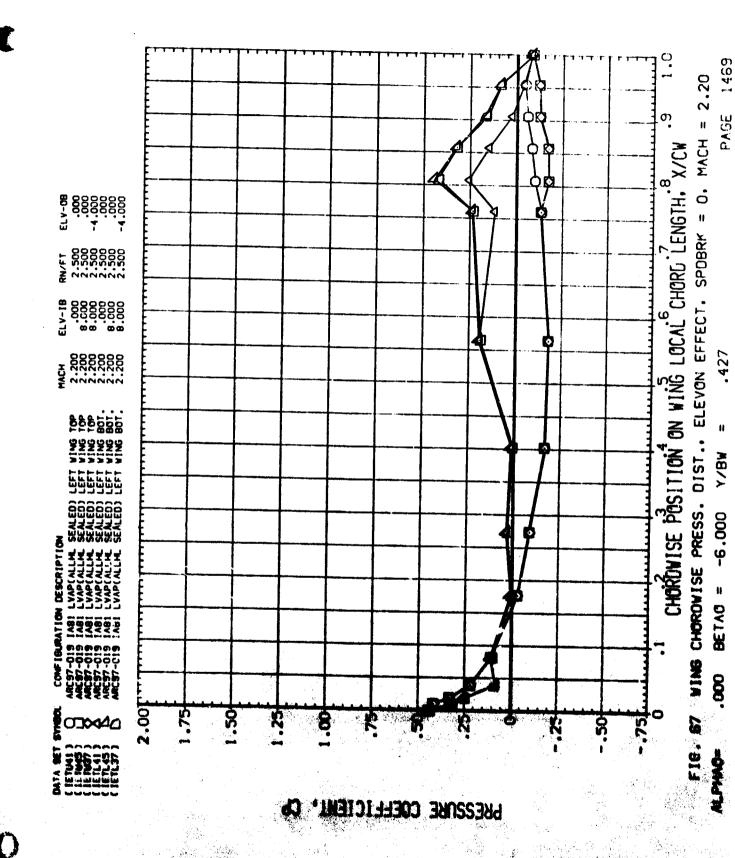
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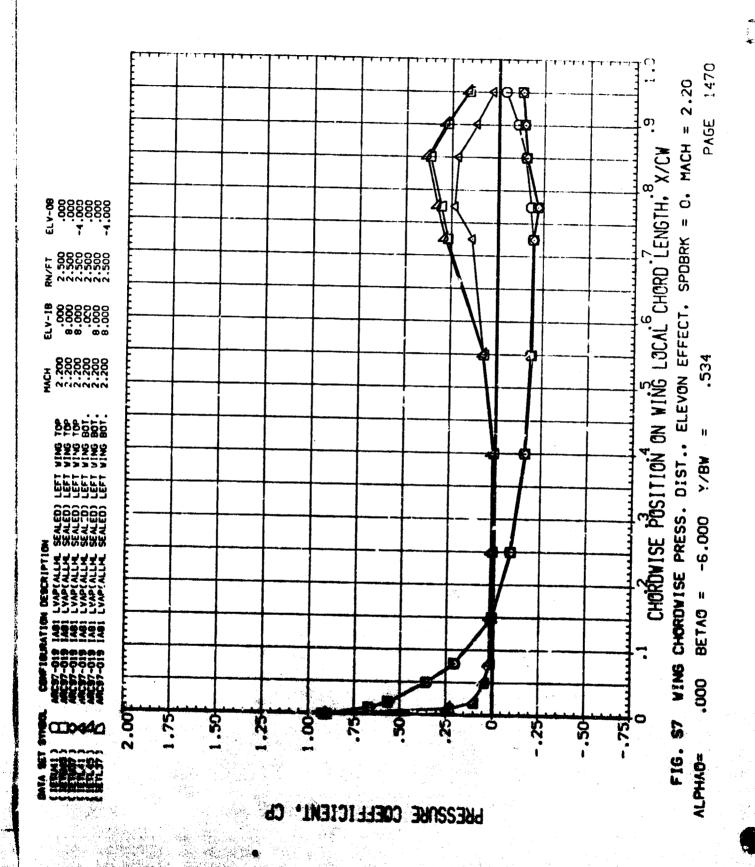
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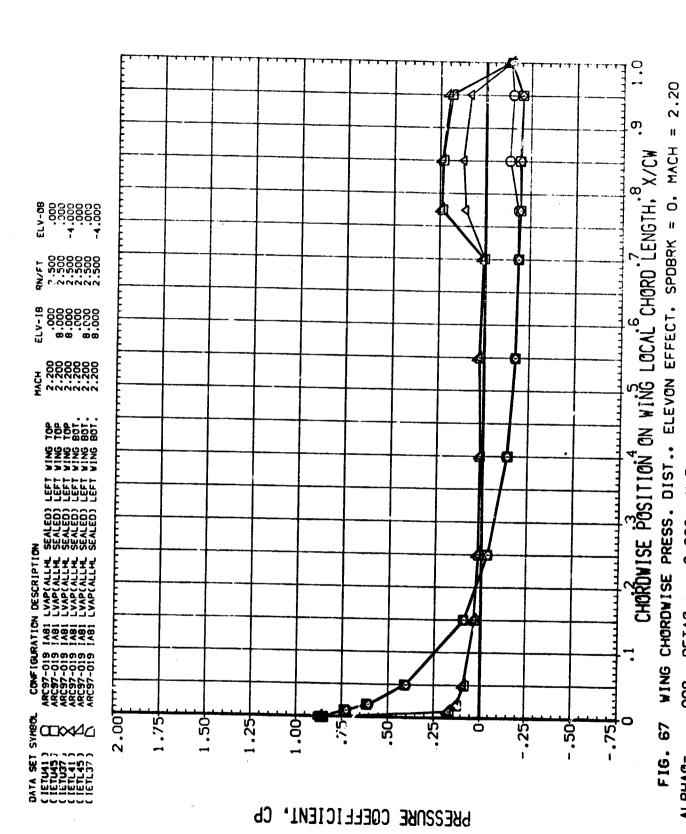
PAGE 1465



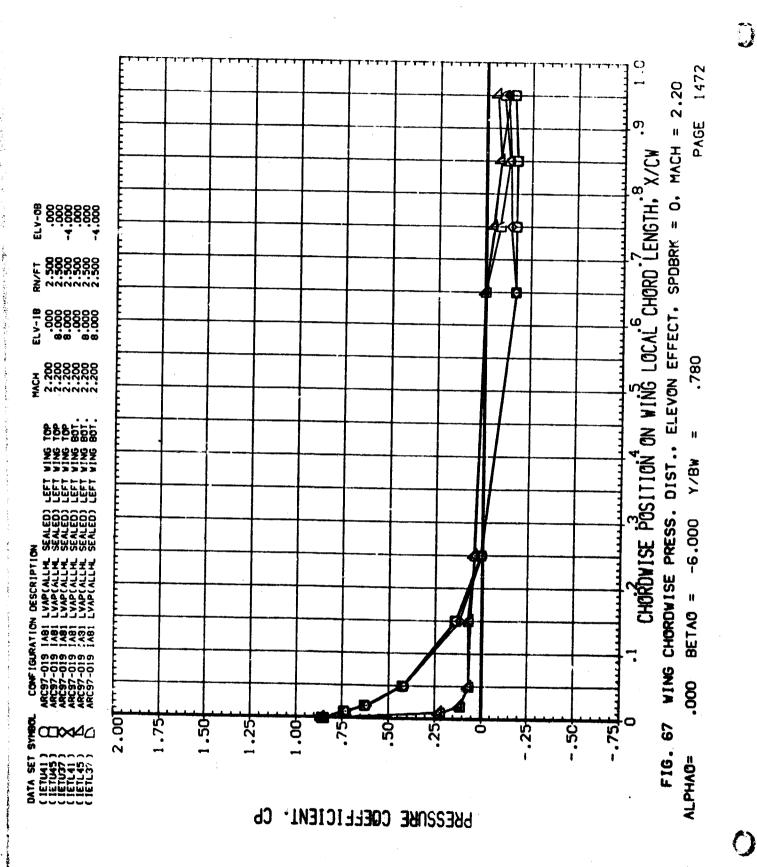


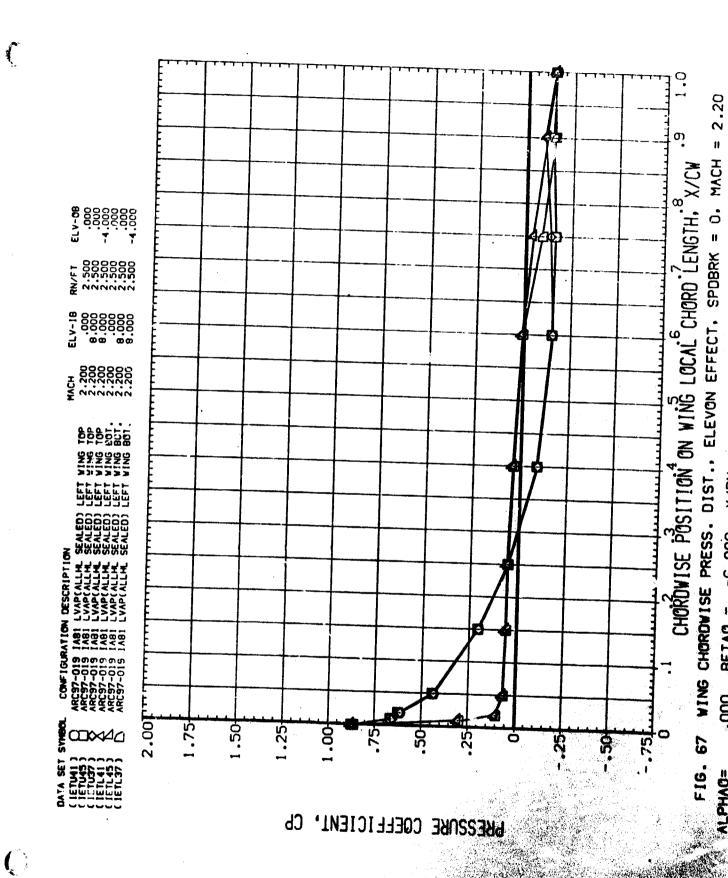


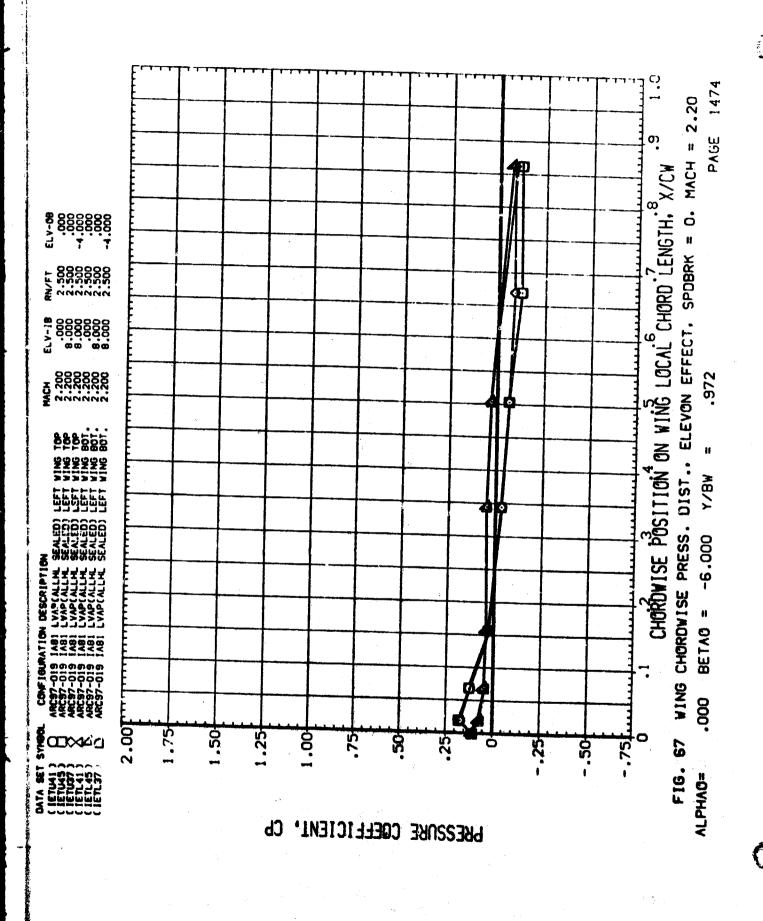




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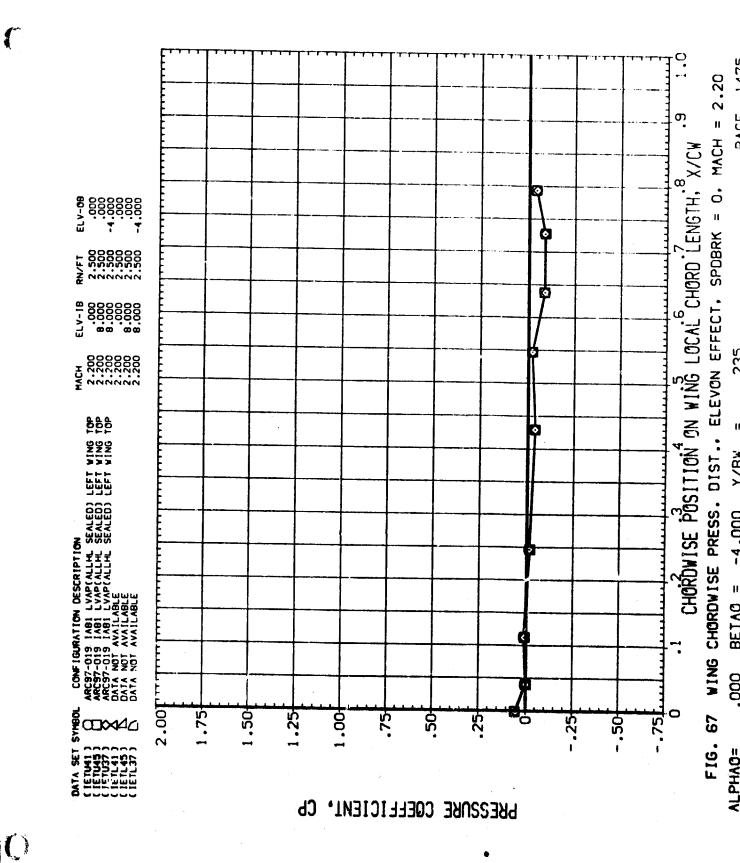


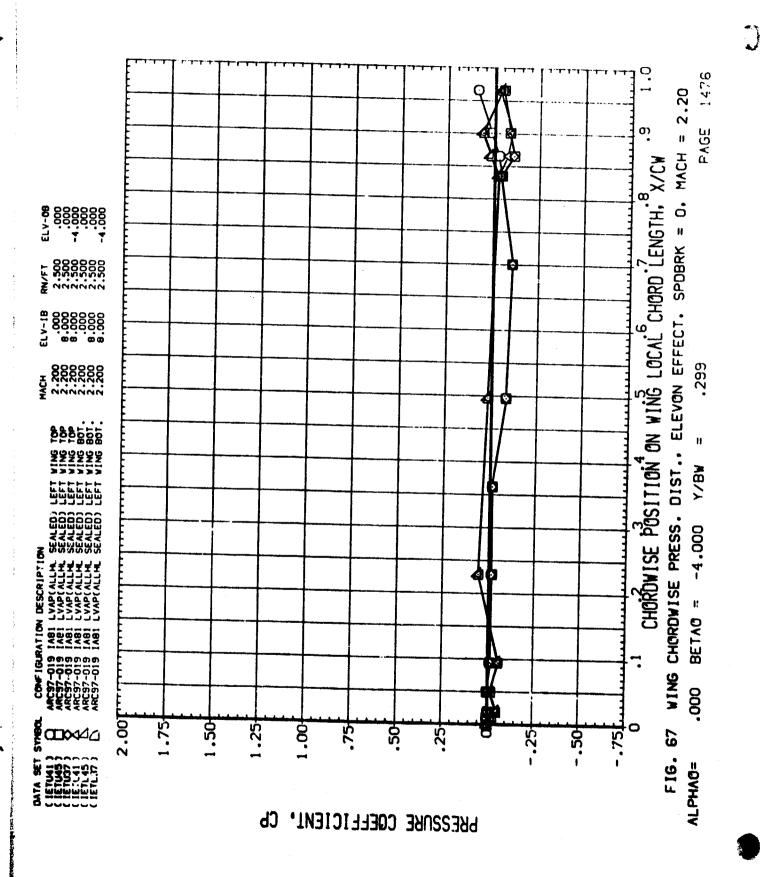


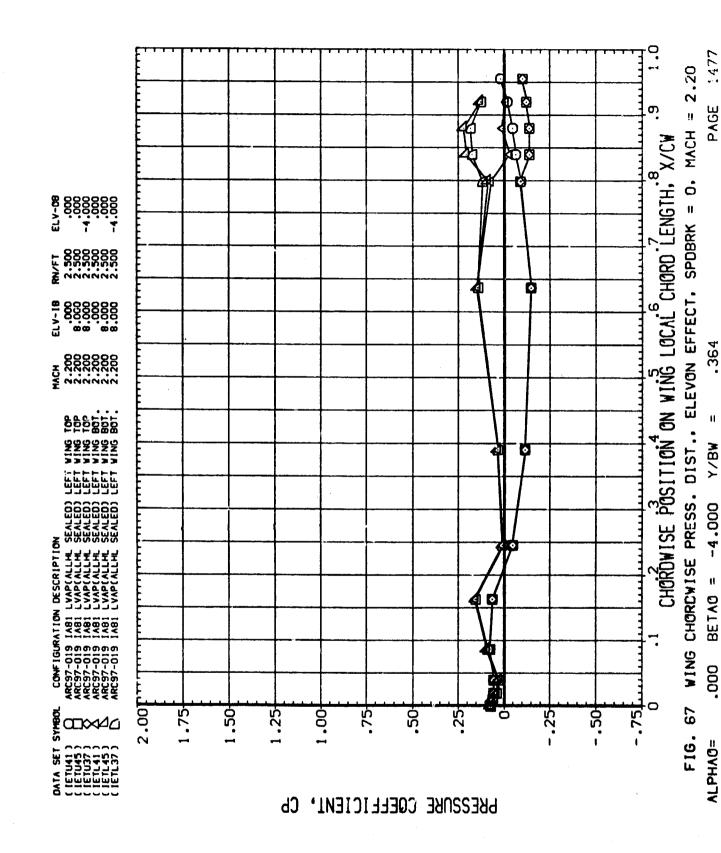
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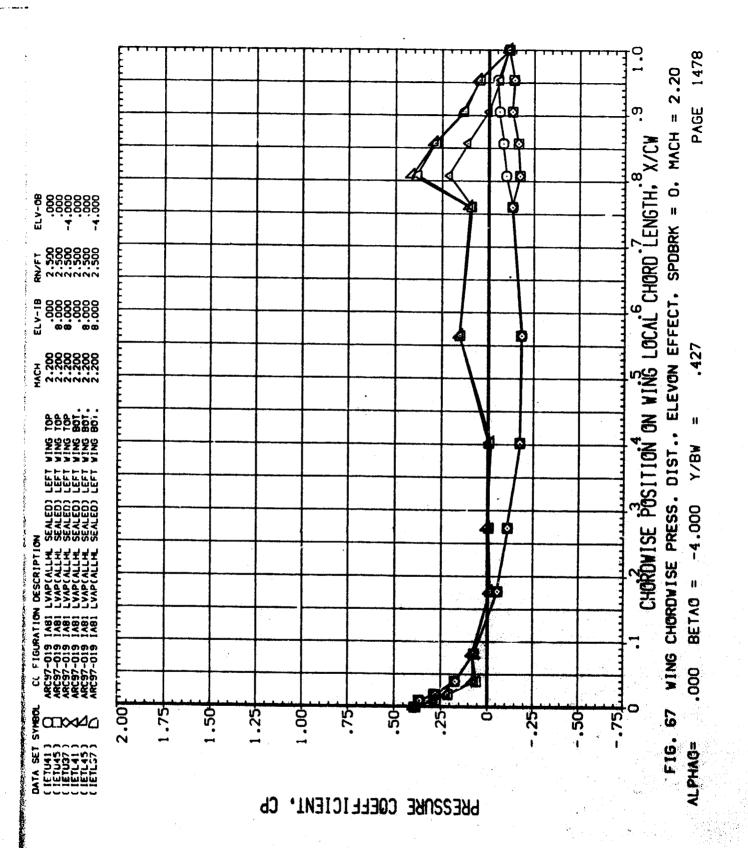
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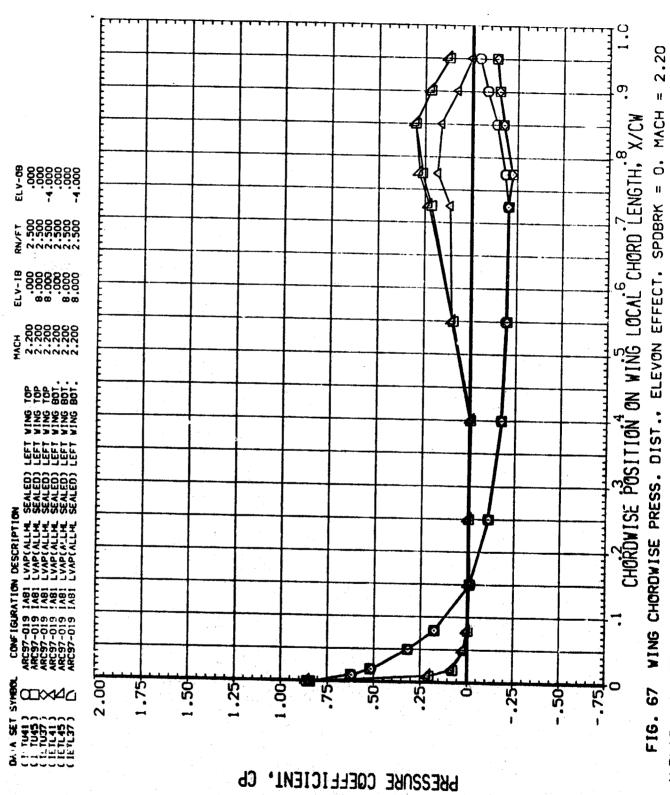
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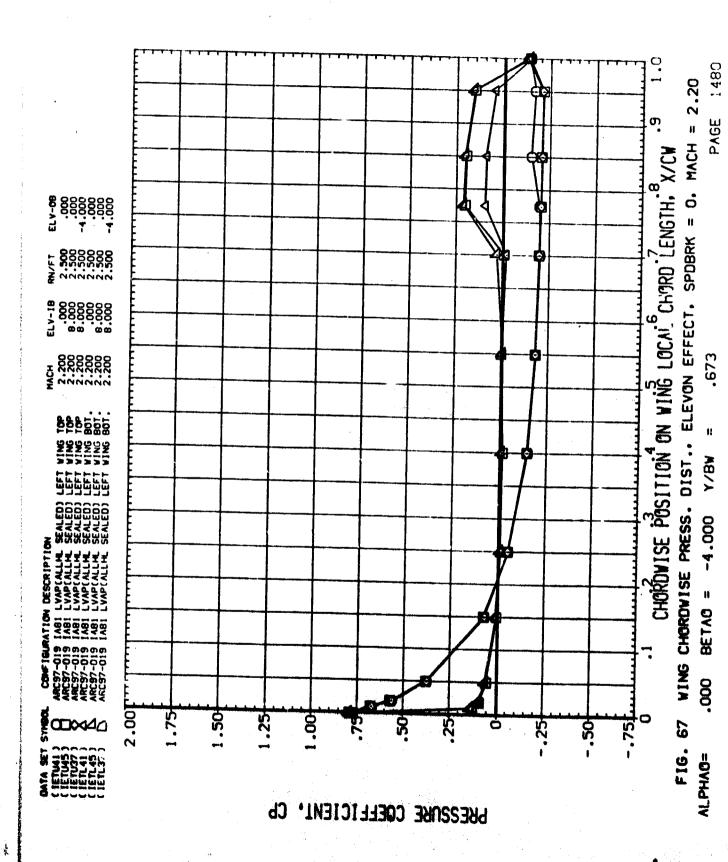


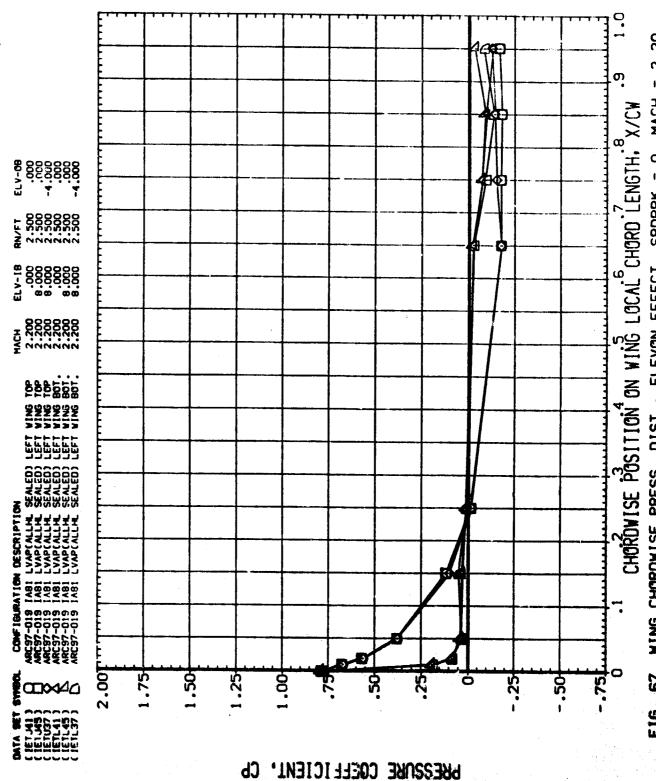




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PAGE .534 Y/BW -4.000 BETAG = 000. ALPHAG=

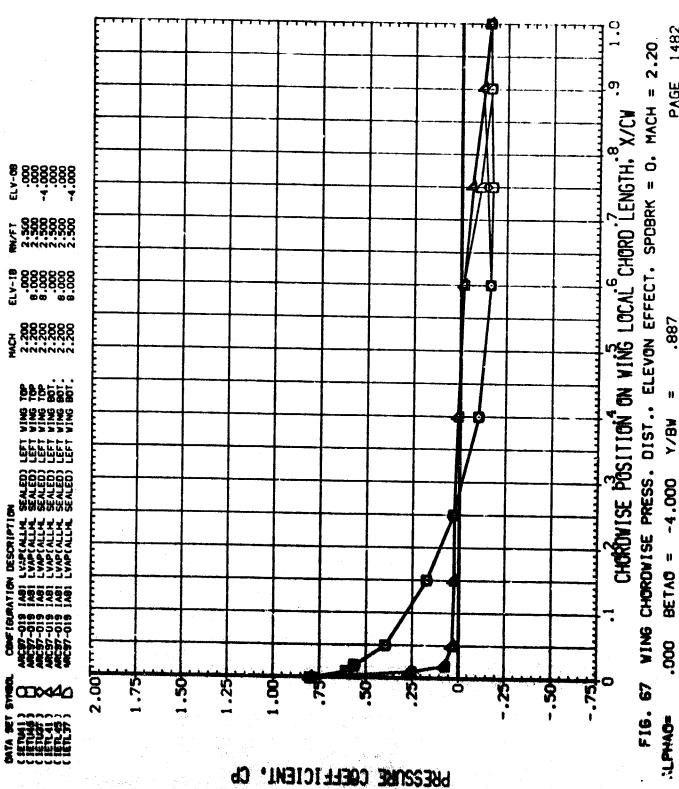




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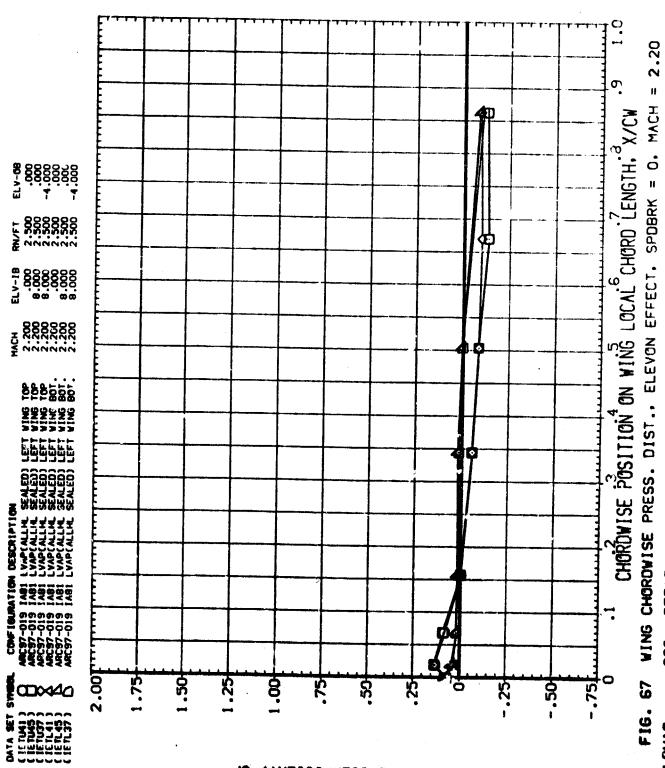
WING CHORDWISE PRESS. DIST., ELEVON EFFECT, SPOBRK = 0, MACH = 2.20 PAGE .780 Y/BW -4.000 BETAO = <u>00</u> F16. 67 ALPHAD=



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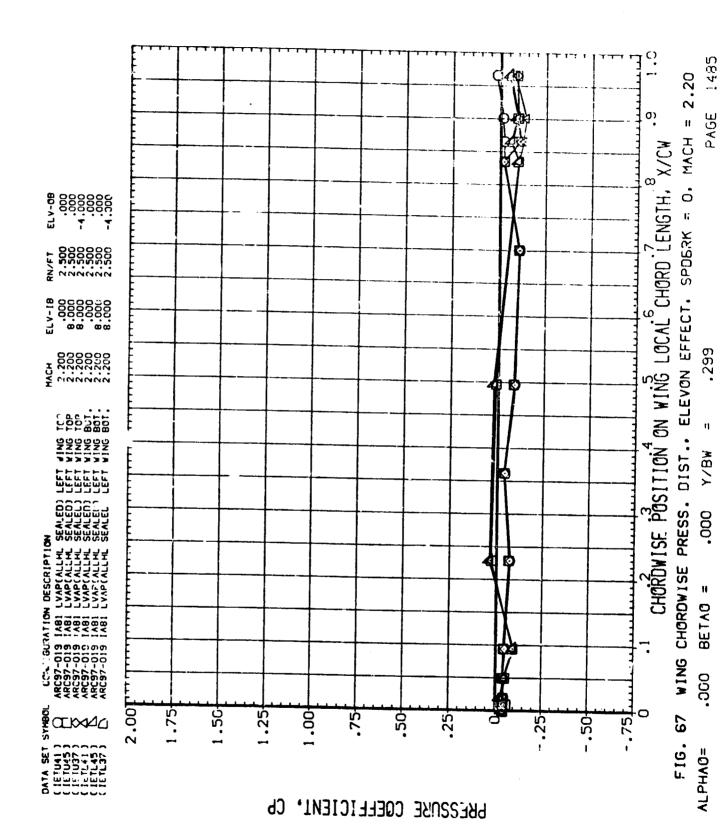
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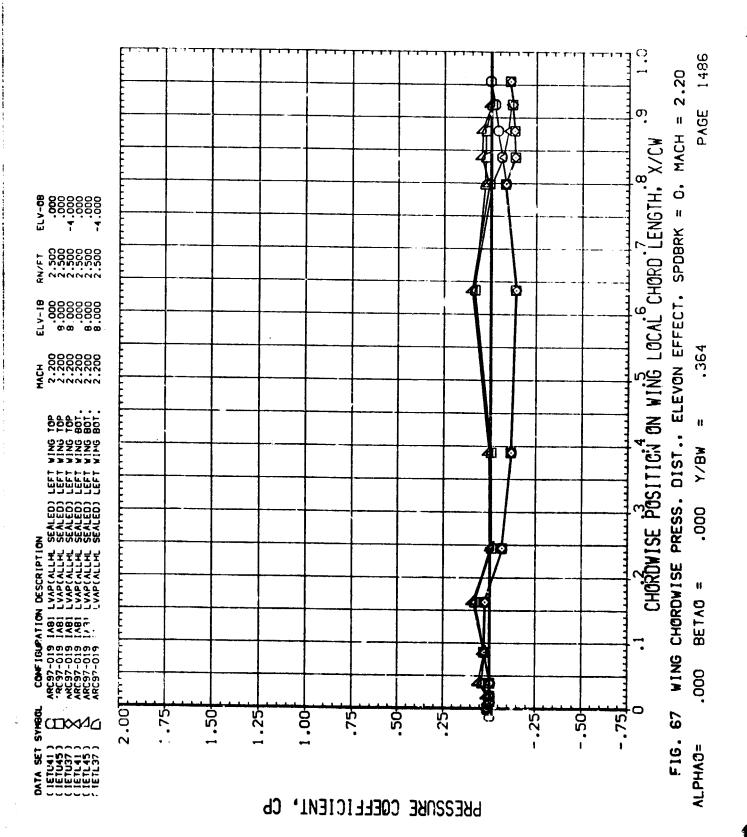
Y/BW

PAGE 1484

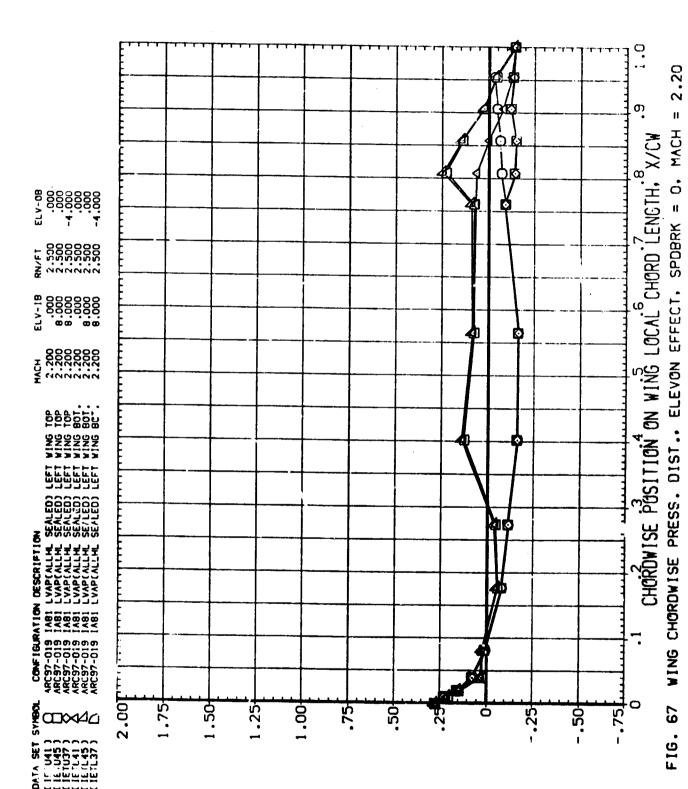
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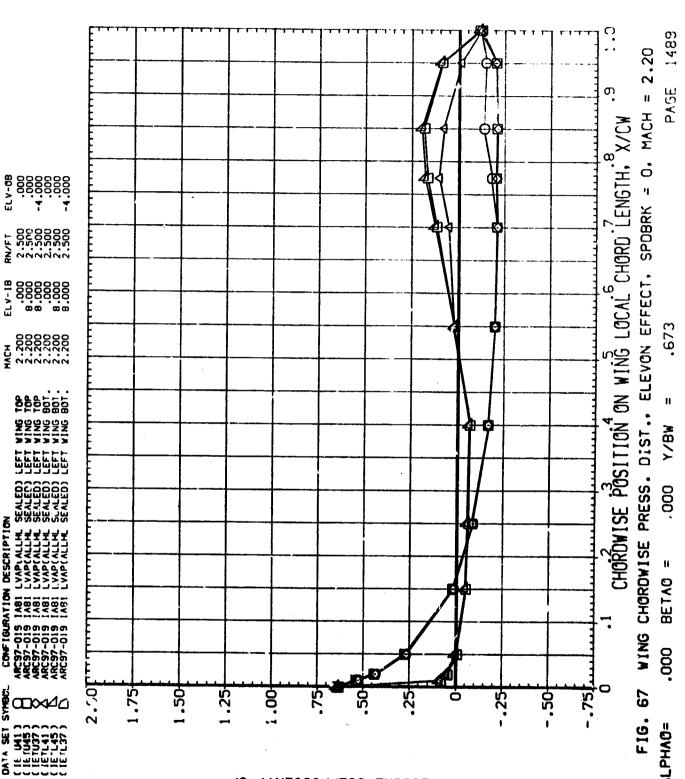
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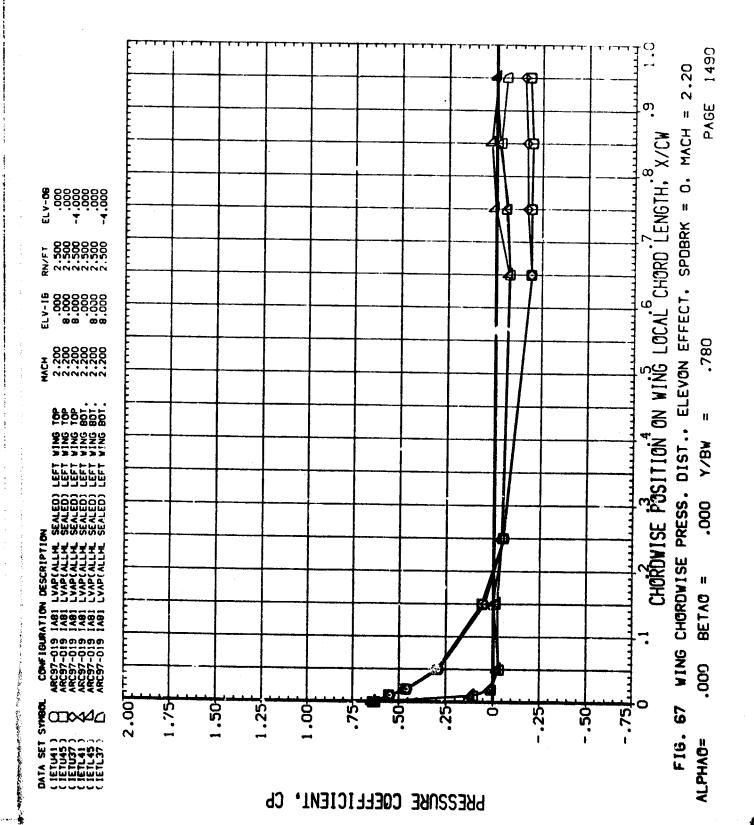
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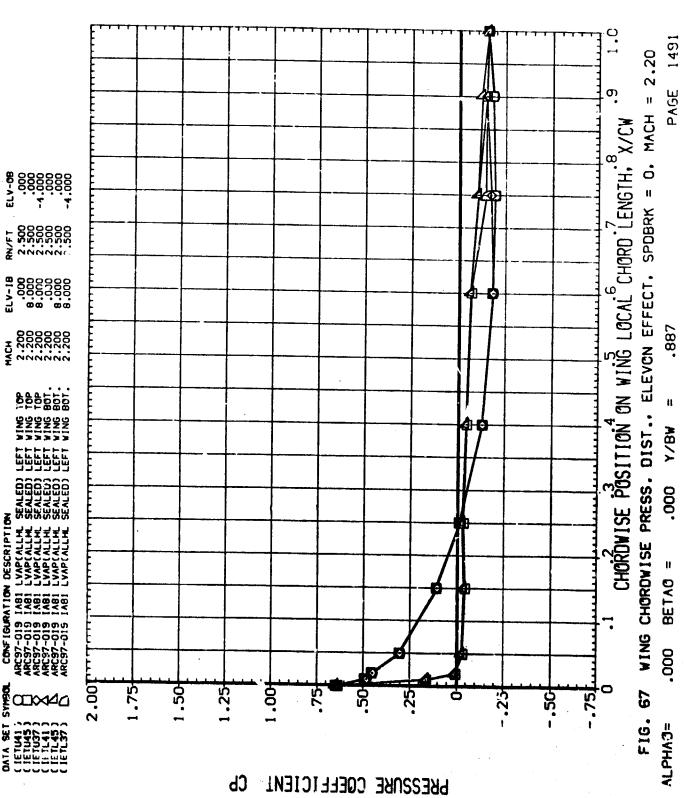
ALPHAG=

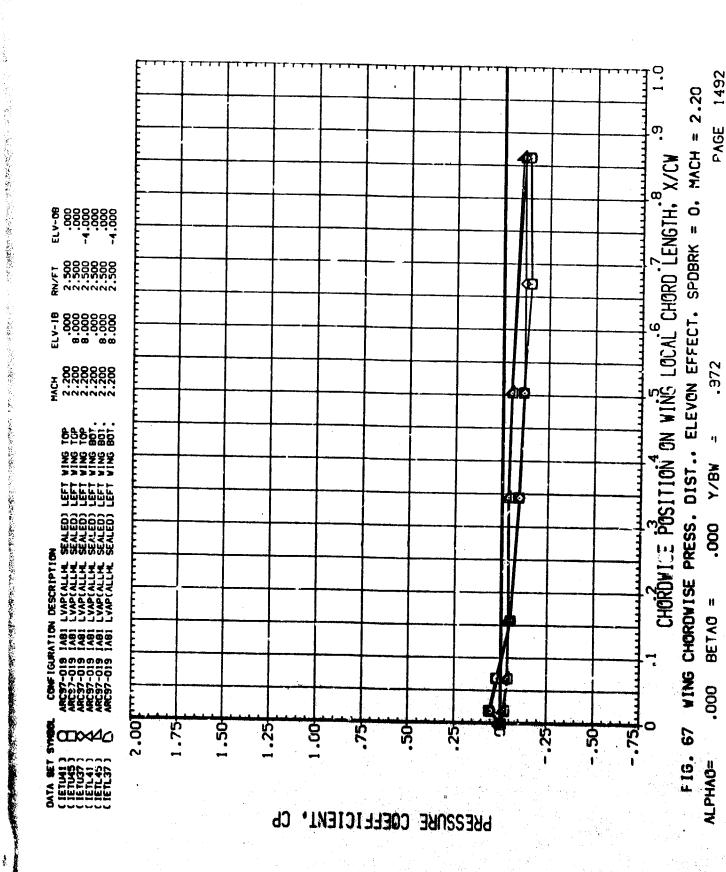


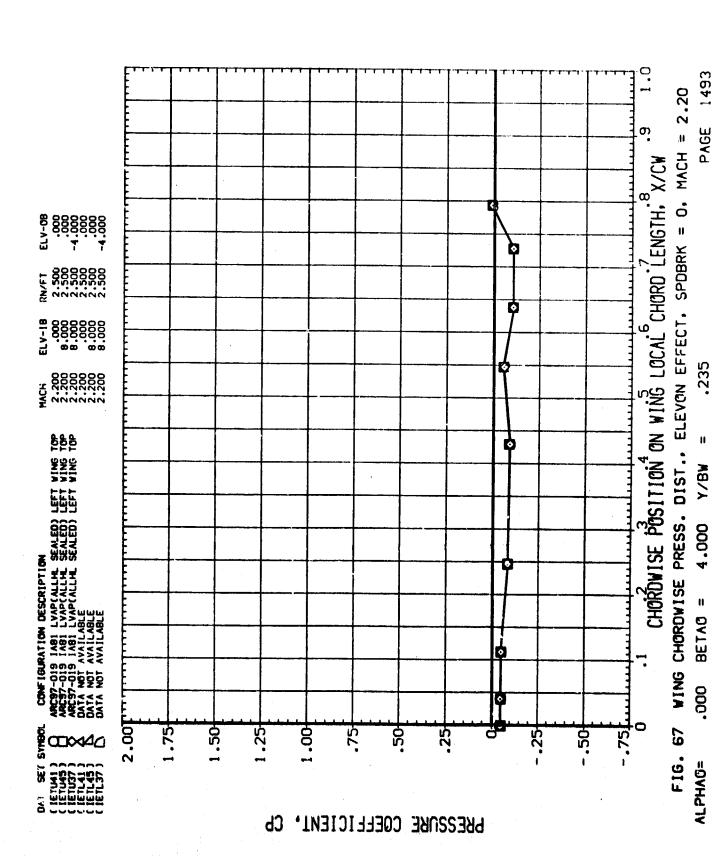
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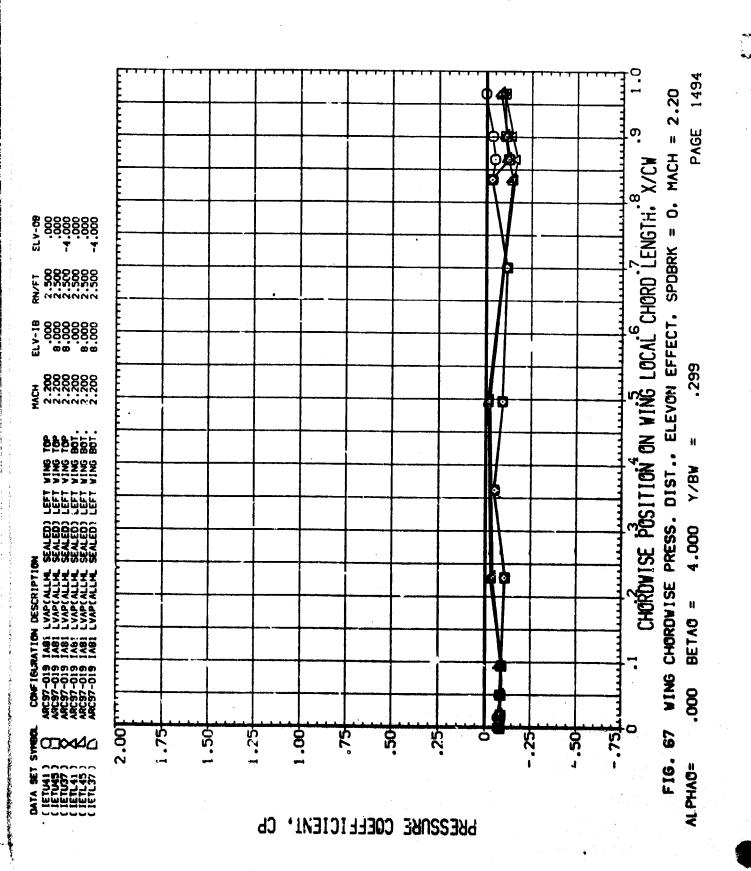
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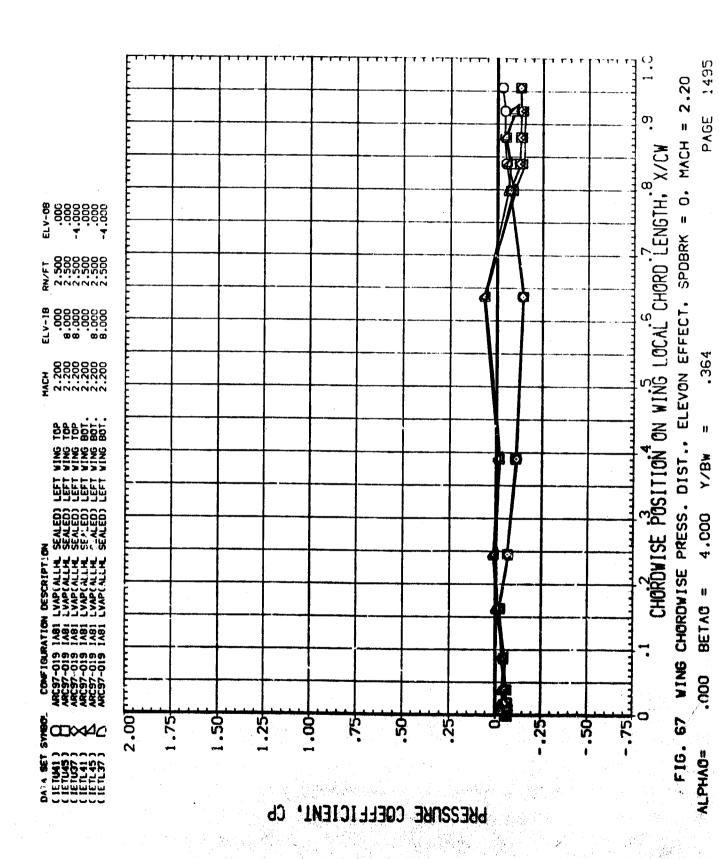


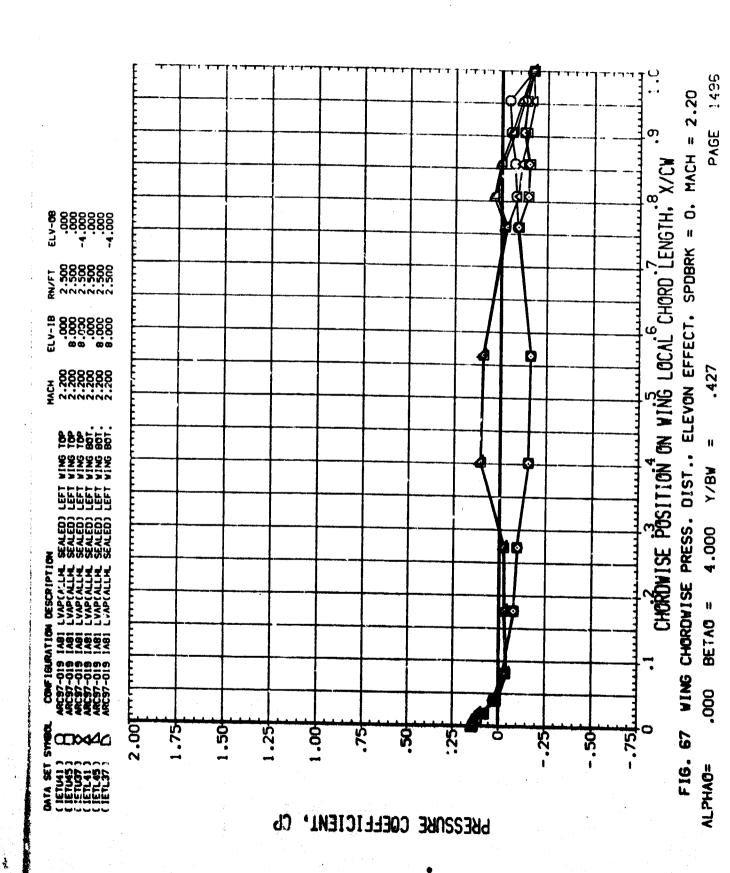


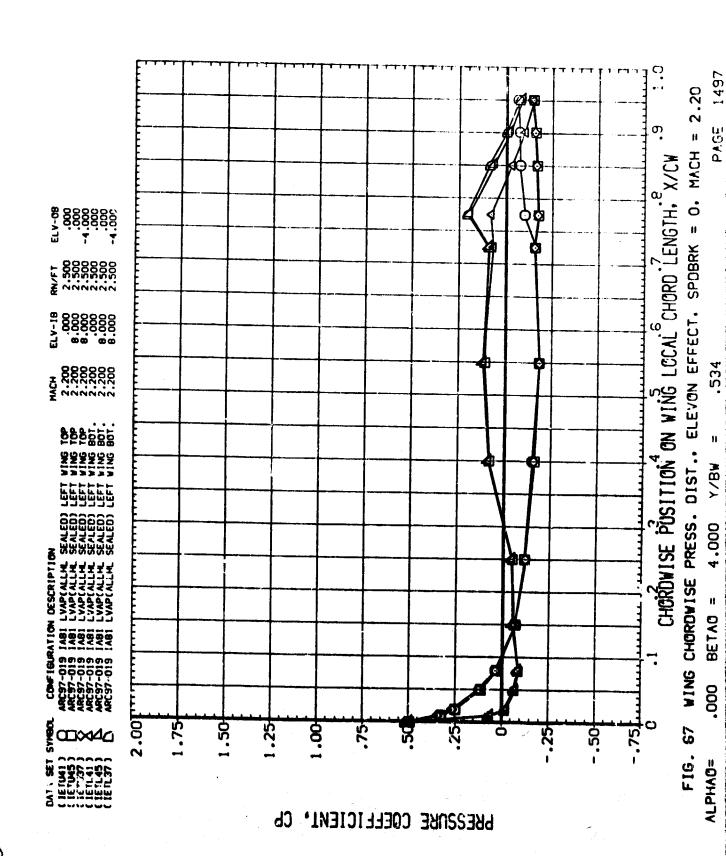


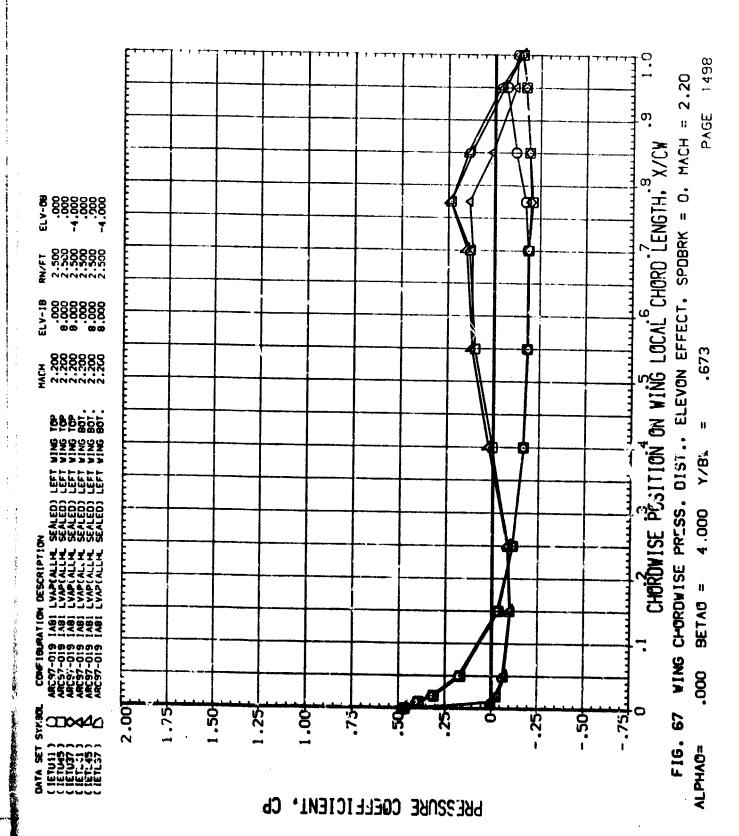


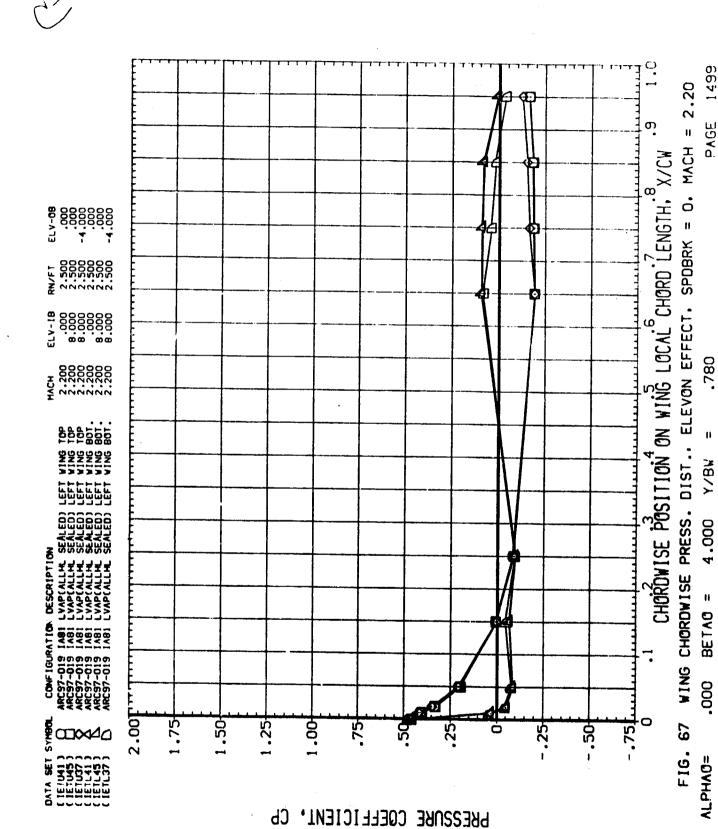




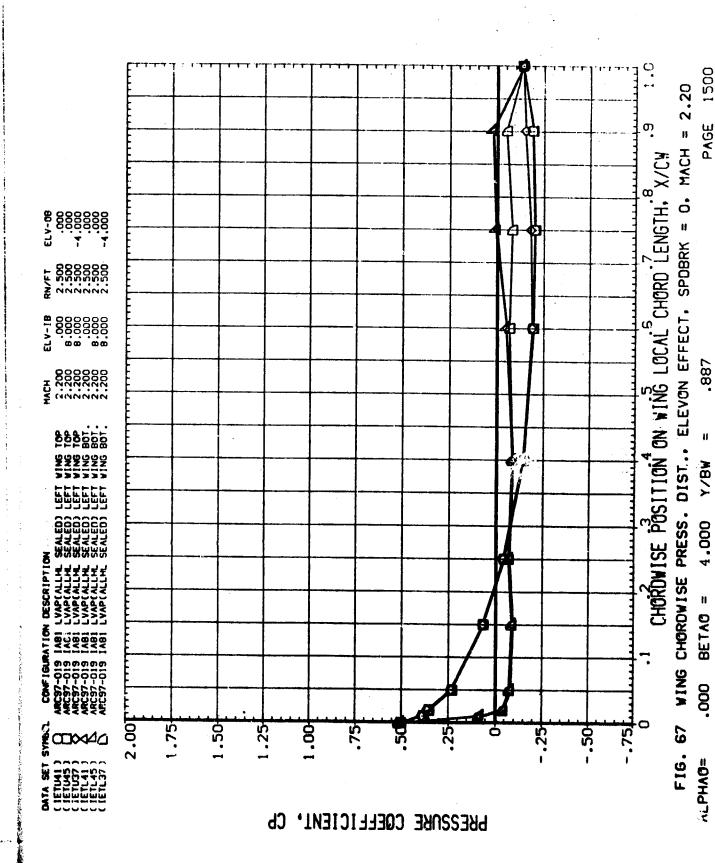


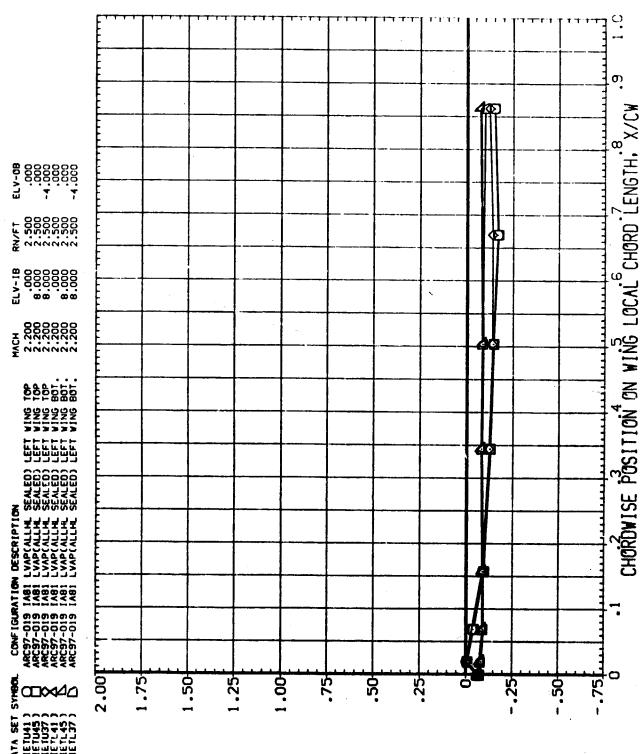






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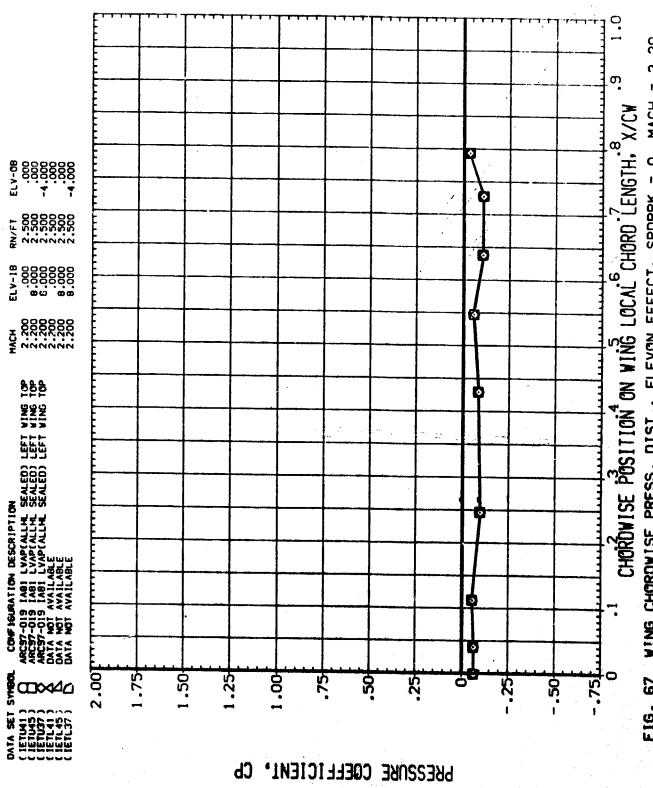


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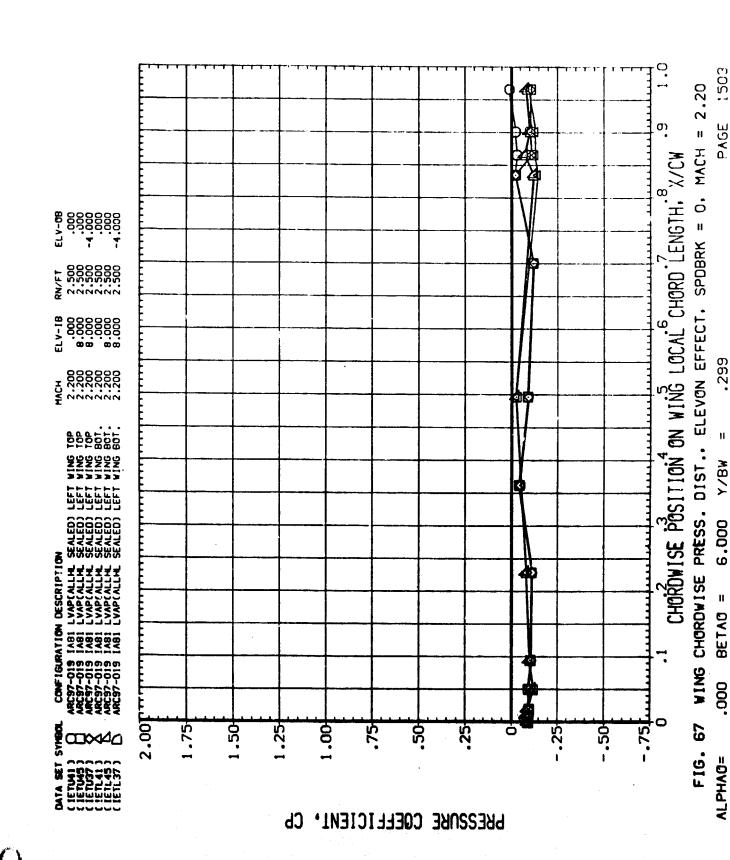
WING CHORDWISE PRESS. DIST., ELEVON EFFECT, SPOBRK = 0, MACH = 2.20 4.000 Y/RW BETAO = 000 FIG. 67 ALPHA0=

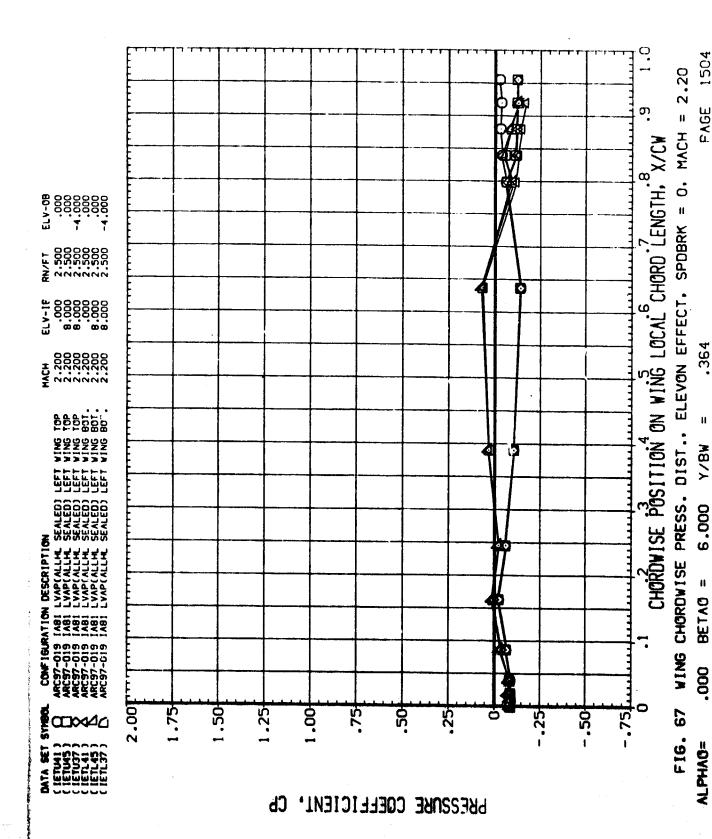
PAGE 1801

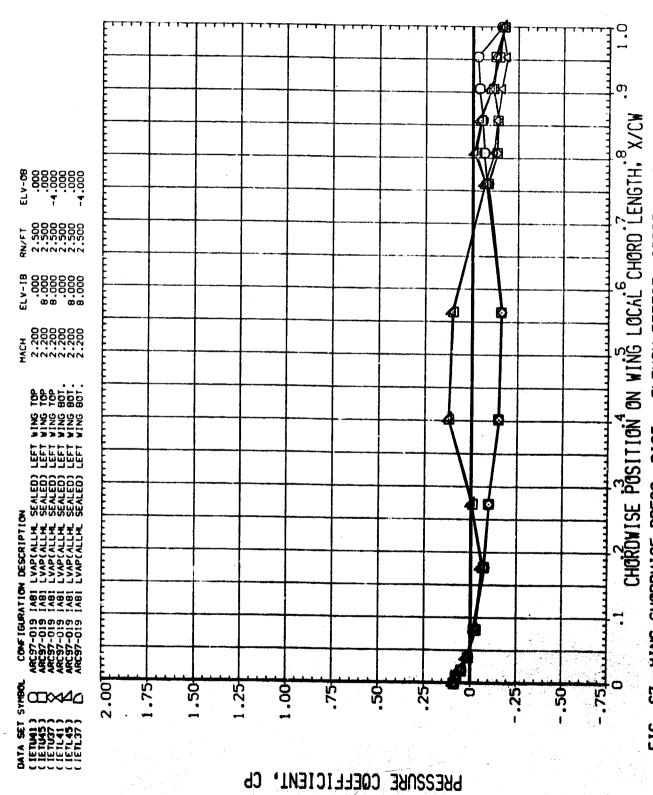


WING CHORDWISE PRESS. DIST., ELEVON EFFECT, SPOBRK = 0, MACH = 2.20 Y/BW 6.000 BETAG = 000. FIG. 67 ALPHAG=

PAGE 1502



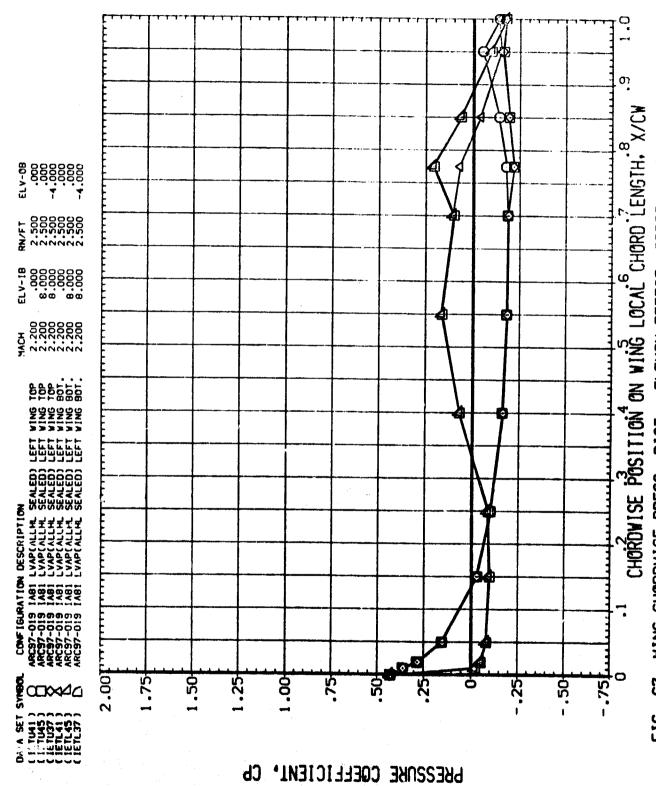




WING CHORDWISE PRESS. DIST., ELEVON EFFECT, SPOBRK = 0, MACH = 2.20 PAGE 6.000 BETAO = 000 FIG. 67 ALPHAG=

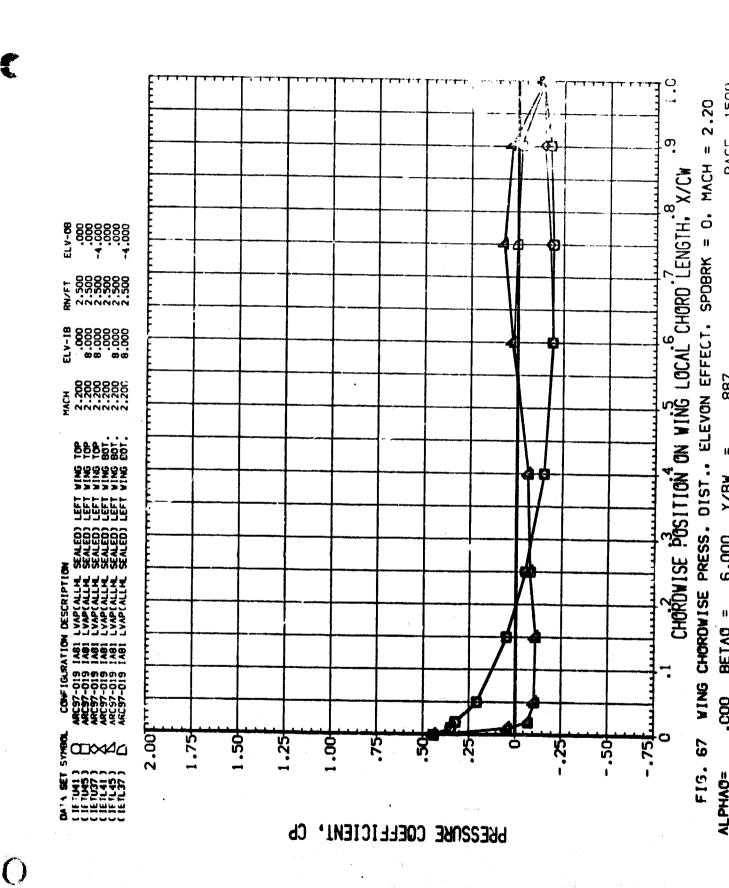
1506 WING CHORDWISE PRESS. DIST., ELEVON EFFECT, SPOBRK = 0, MACH = 2.20 PAGE H Y/BW 6.000 BETAG = 000. FIG. 67 ALPHAG=

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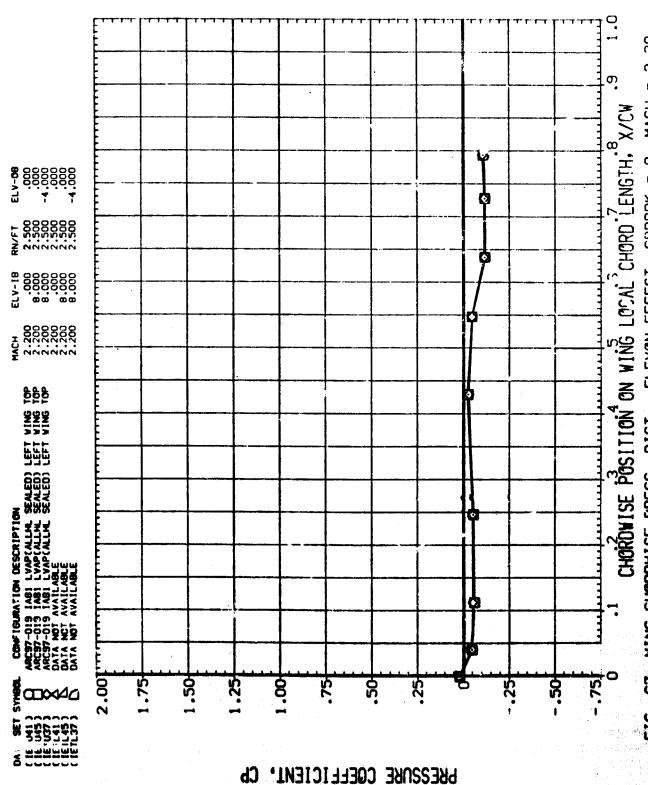
1507 WING CHORDWISE PRESS. DIST., ELEVON EFFECT, SPOBRK = 0, MACH = 2.20 PAGE .673 Y/BW 6.000 BETAO = 000. F16. 67 ALPHAG=

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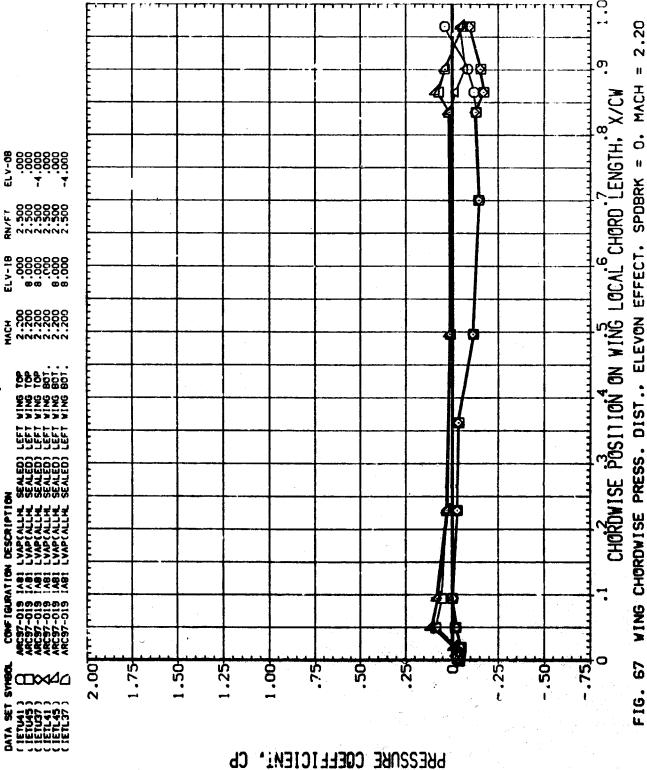


1510 WING CHORDWISE PRESS. DIST. ELEVON EFFECT. SPDBRK = 0. MACH = 2.20 PAGE .972 11 Y/BW 6.000 BETAG = .000 FIG. 67 AL PHAG=

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1511 MACH = 2.20PAGE FIG. 67 WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPOBRK = 0. Y/BW -4.000 BETAG = 4.000 A PHAGE



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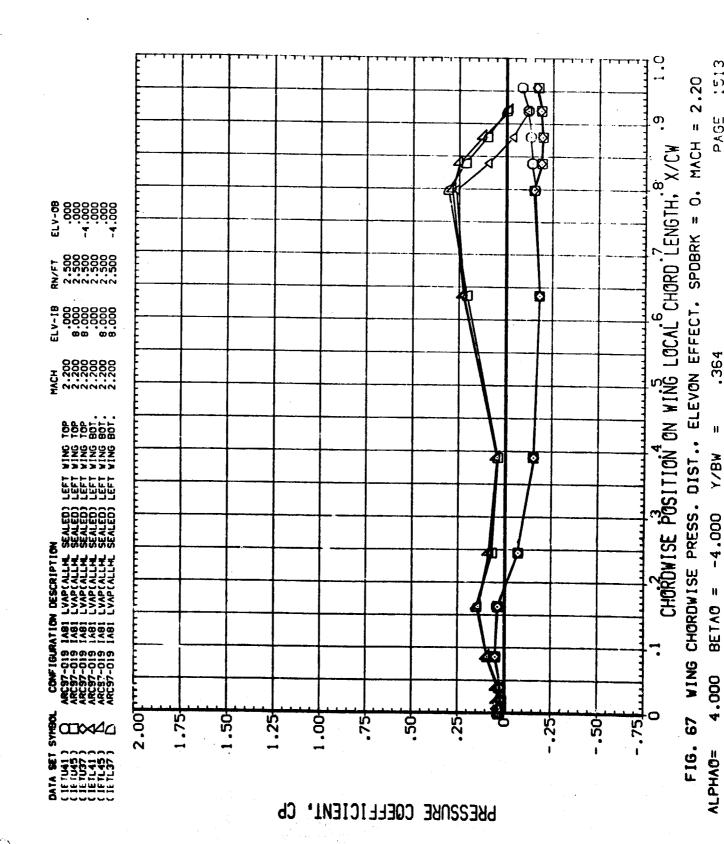
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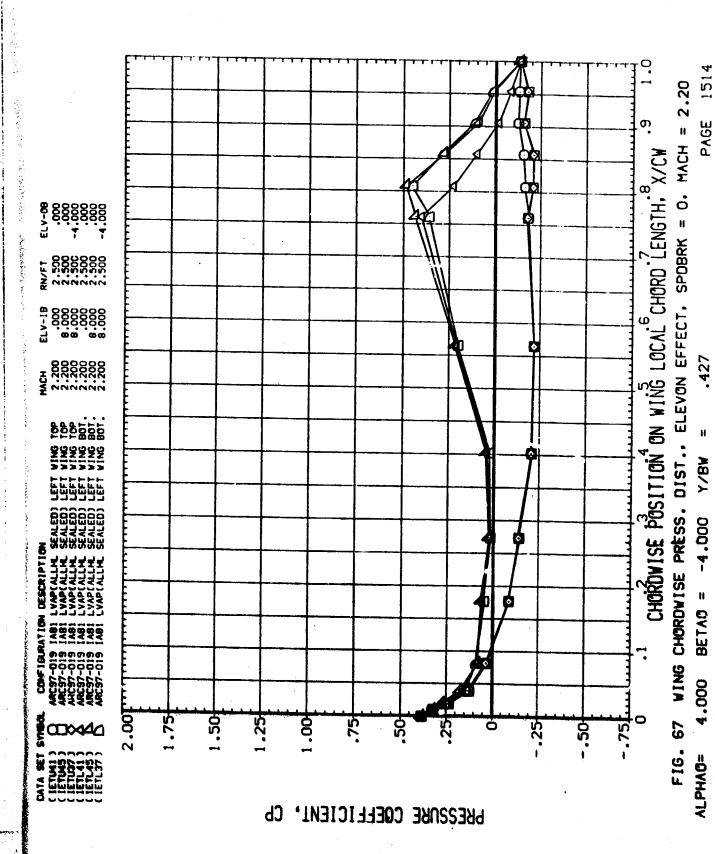
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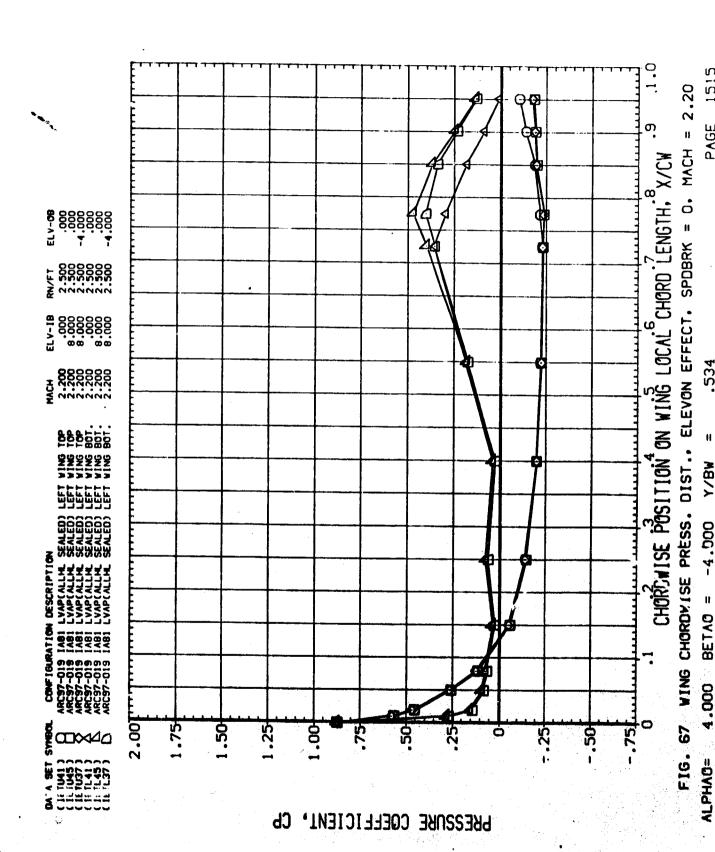
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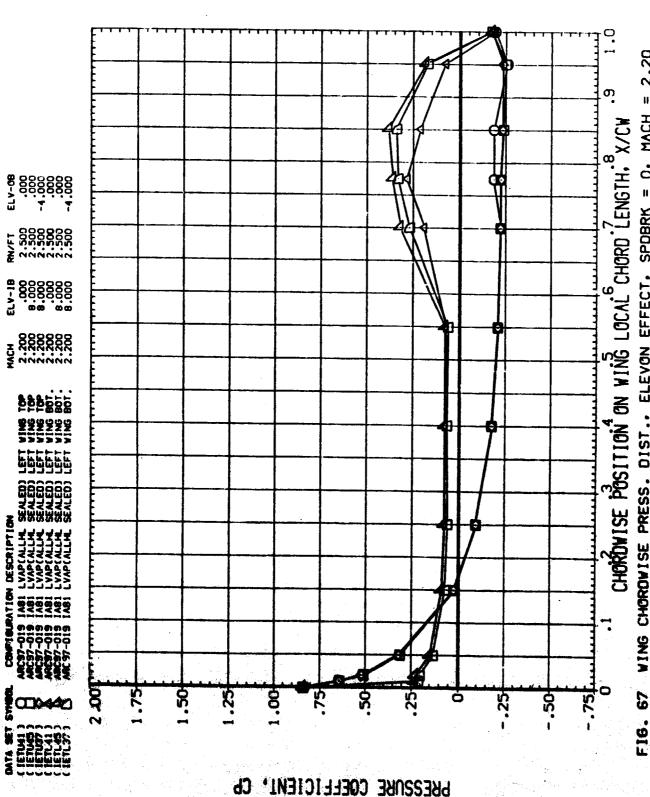
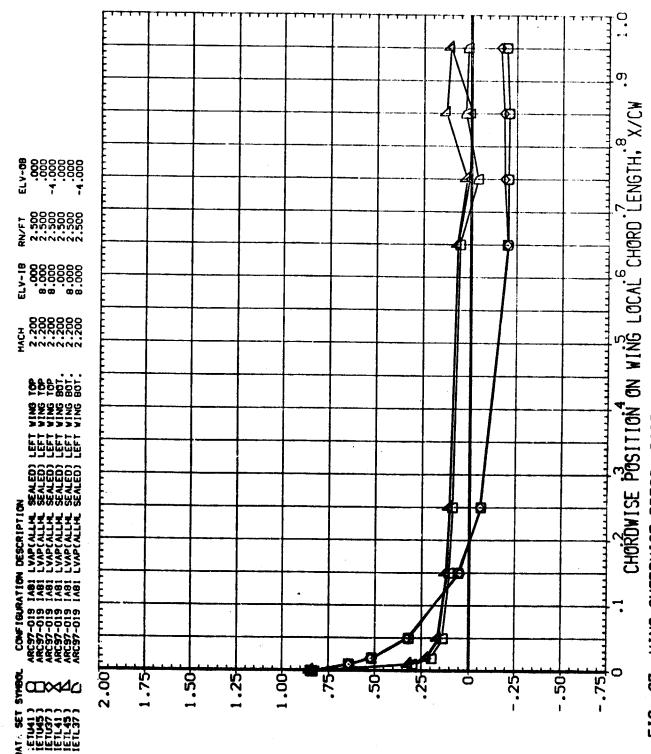
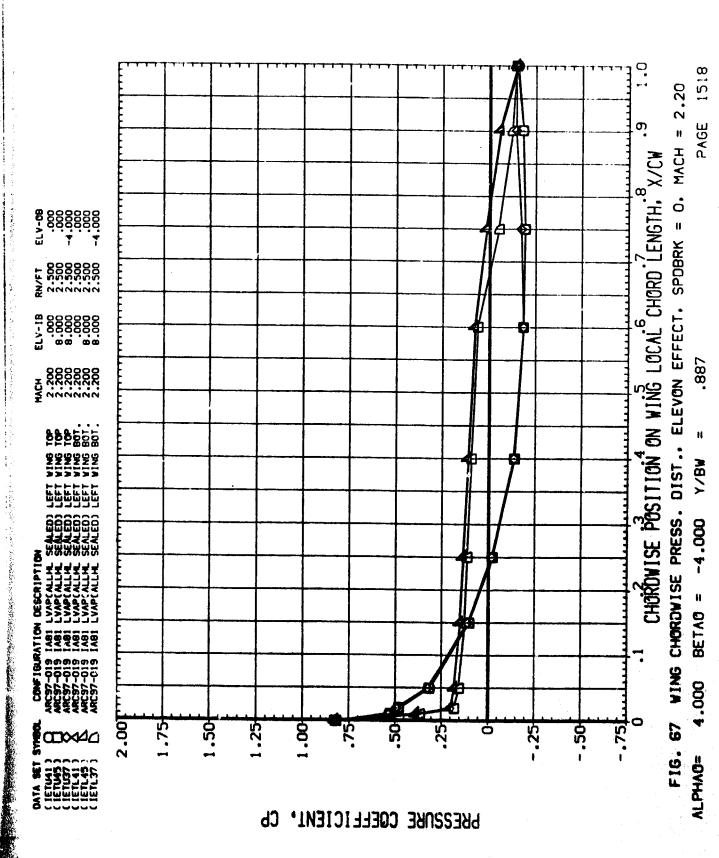


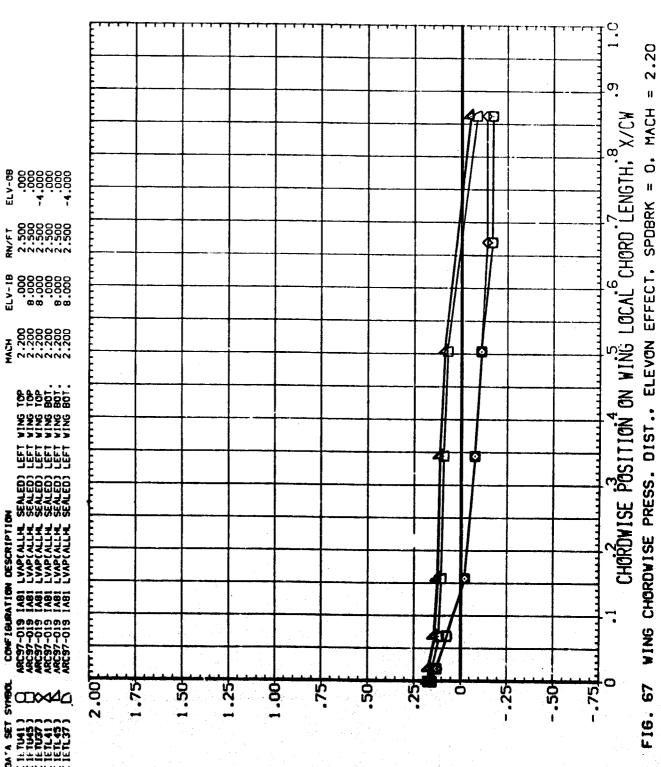
FIG. 67 WING CHORDWISE PRESS. DIST., ELEVON EFFECT, SPOBRK = 0. MACH = 2.20 Y/BW -4.000 BETAO = 4.000 ALPHA0=



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1517 WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPDBRK = 0. MACH = 2.20 PAGE .780 Y/BW -4.000 BETAO = 4.000 FIG. 67 ALPHAG=

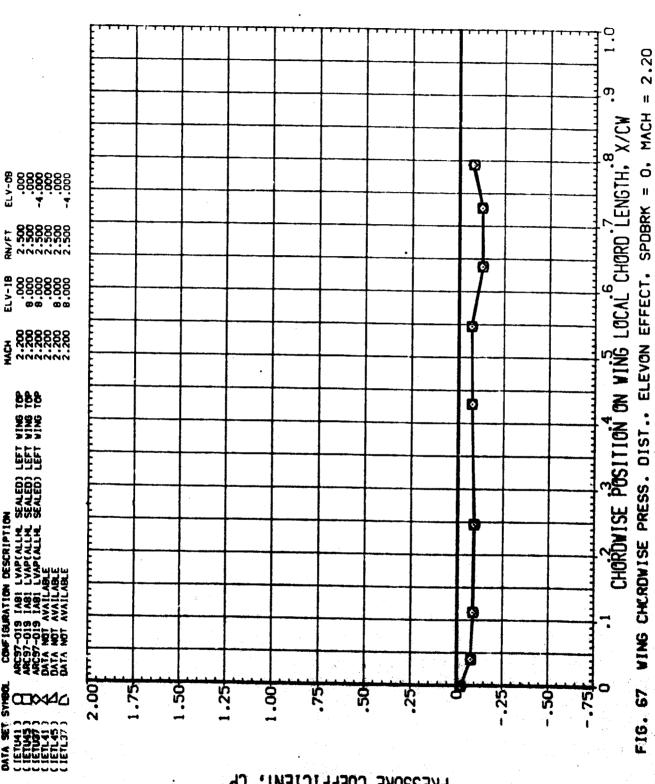




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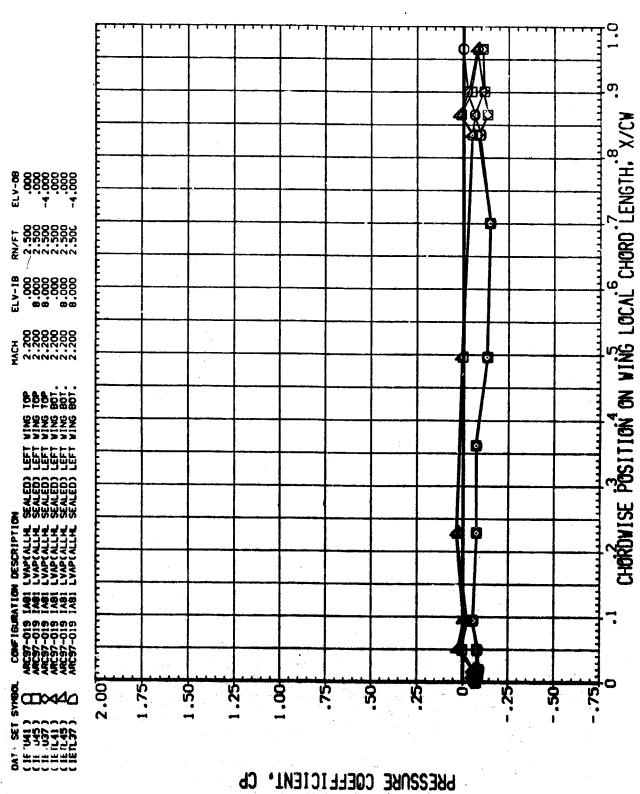
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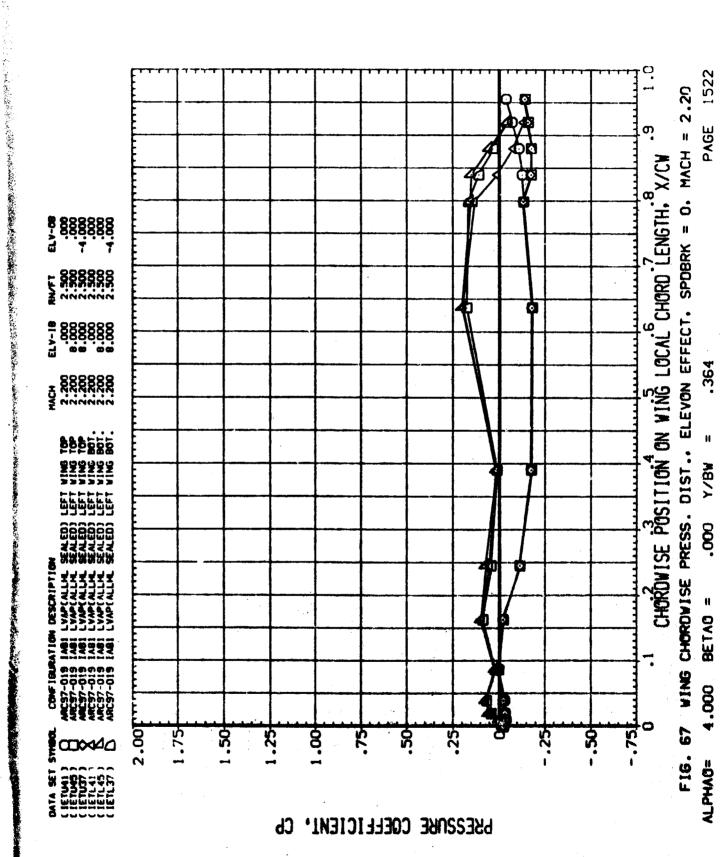
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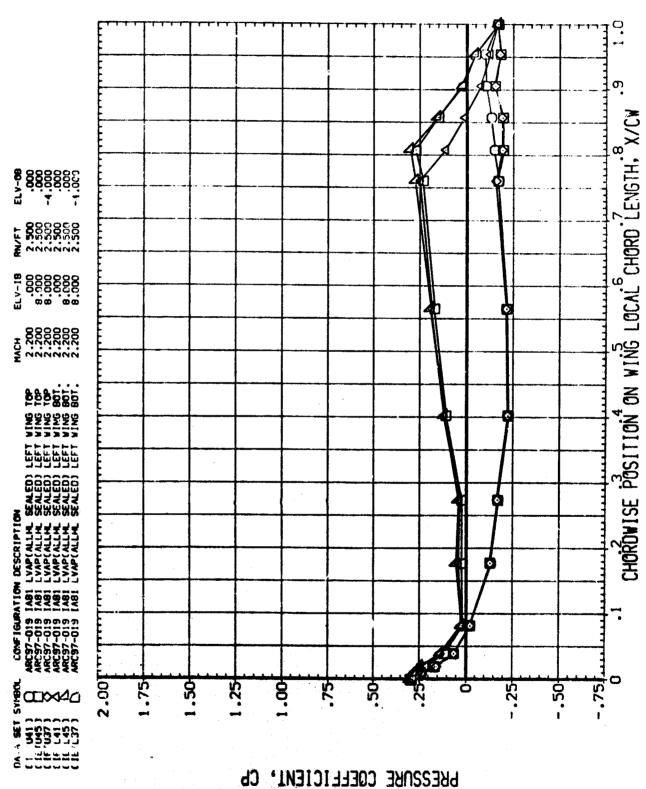
PRESSURE COEFFICIENT,



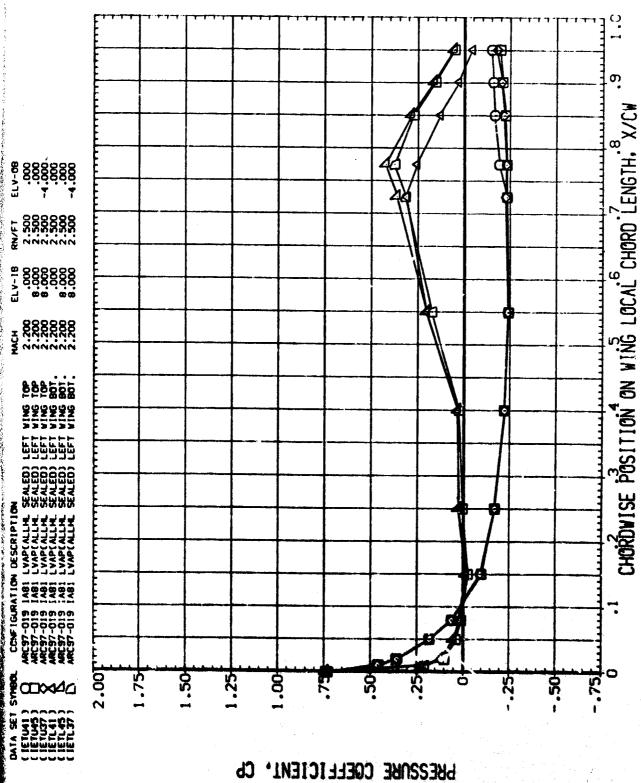
PAGE 1521 WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPOBRK = 0, MACH = 2.20 Y/BW 8 BETAG = 4.000 F16. 67 ALPHAG=

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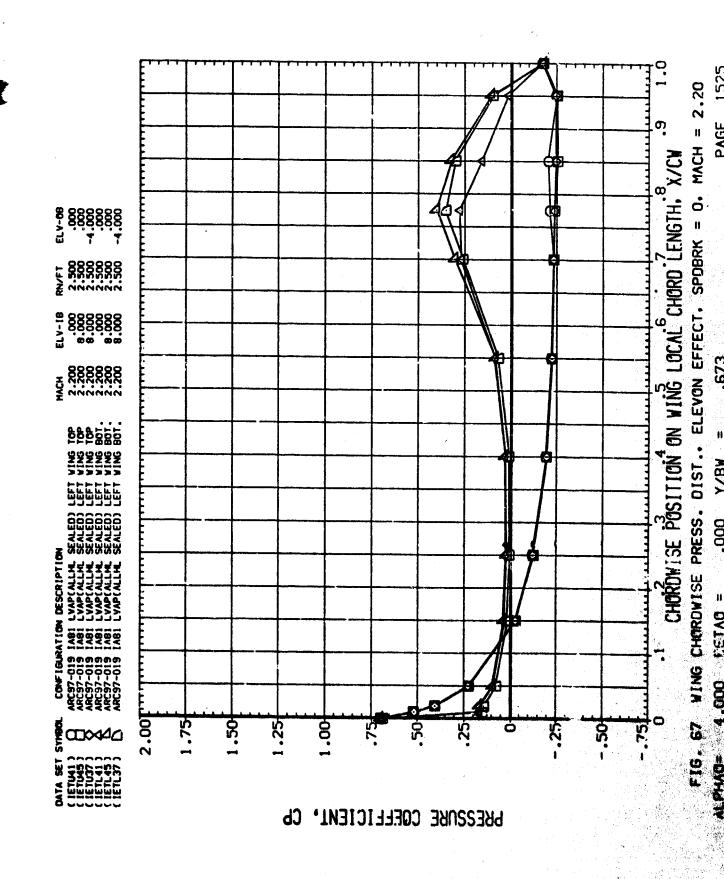


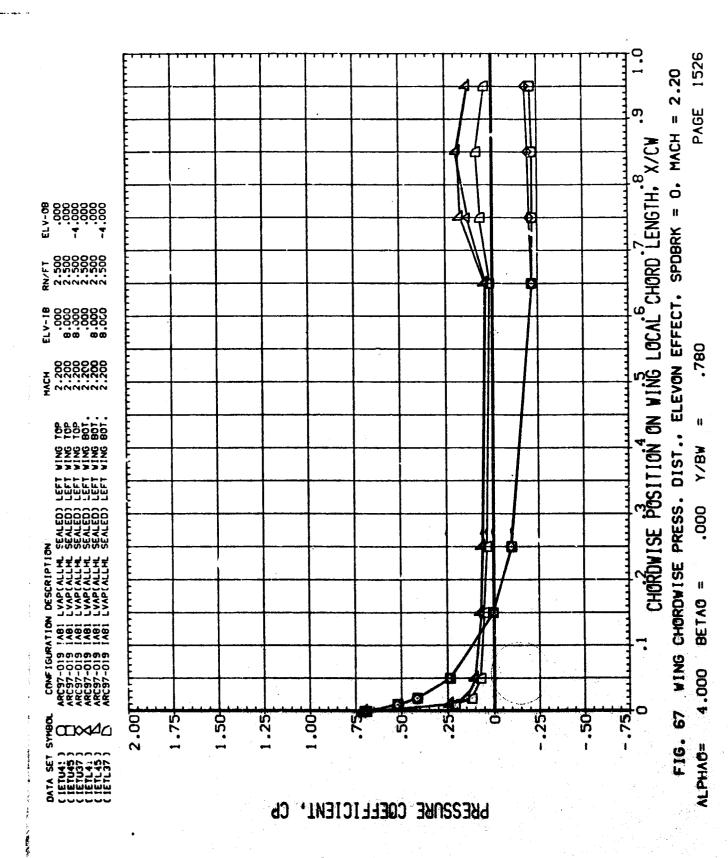


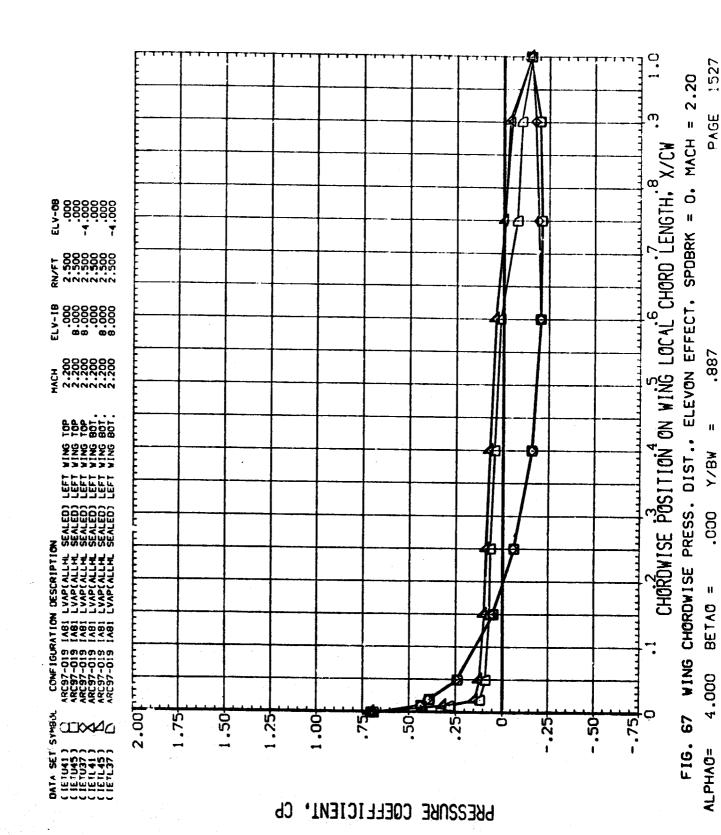
WING CHORDWISE PRESS. DIST., ELEVON EFFECT, SPUBRK = 0, MACH = 2.20 PAGE BETAG = 4.000 FIG. 67 ALPHAG=

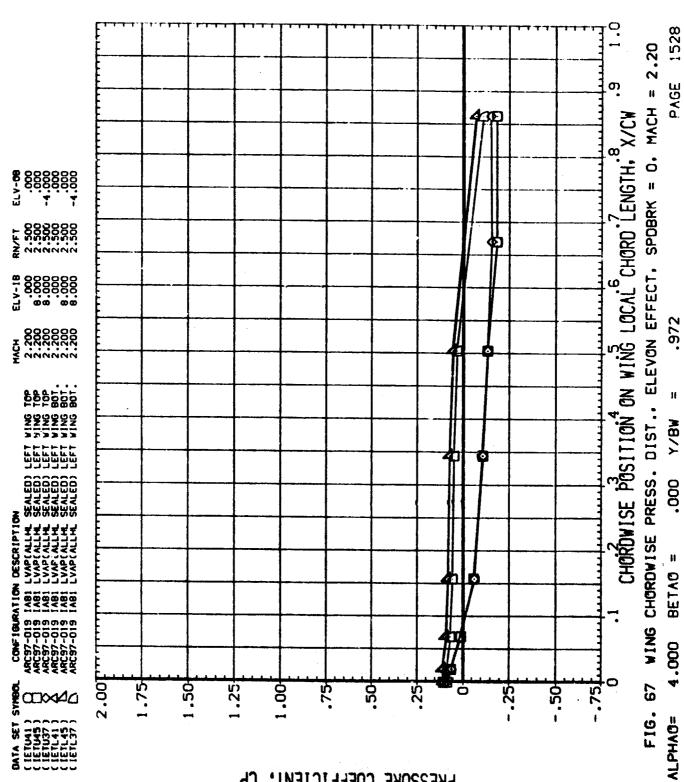


PAGE 1524 WING CHORDWISE PRESS. DIST. ELEVON EFFECT. SPOBRK = 0. MACH = 2.20 .534 900. BETAG F16. 67

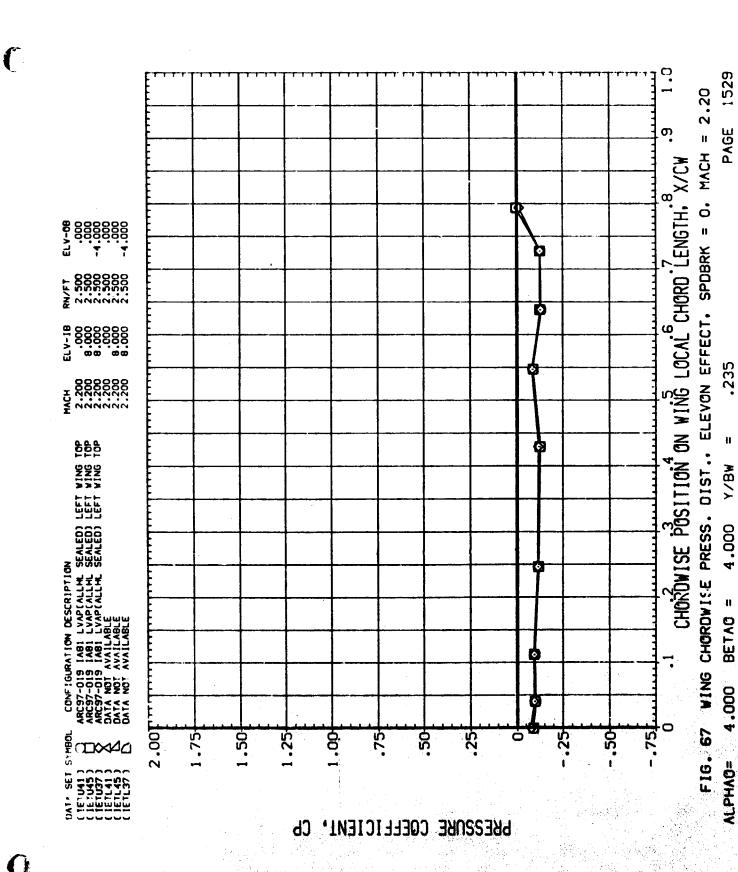








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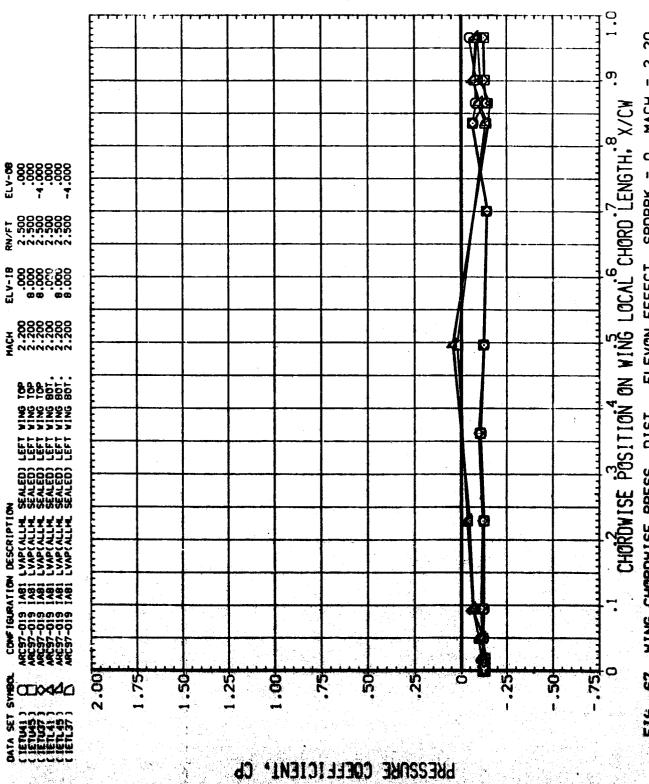
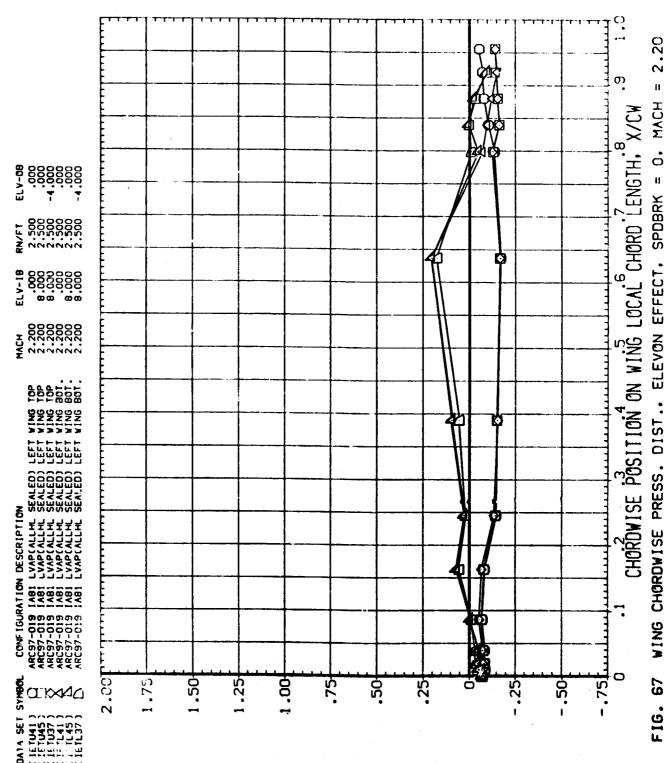


FIG. 67 WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPDBRK = 0, MACH = 2.20 HAO= 4.000 BETAO = 4.000 Y/BW = .299 ALPHAD=



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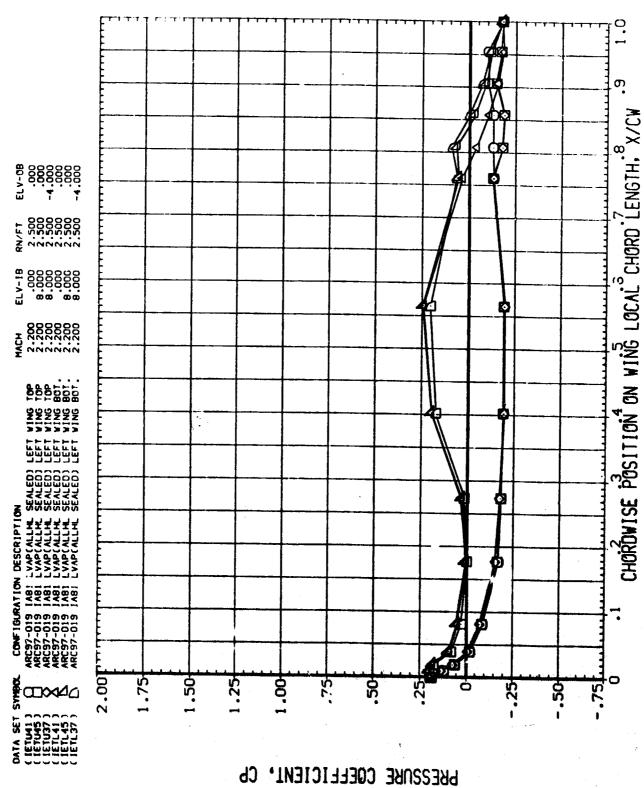
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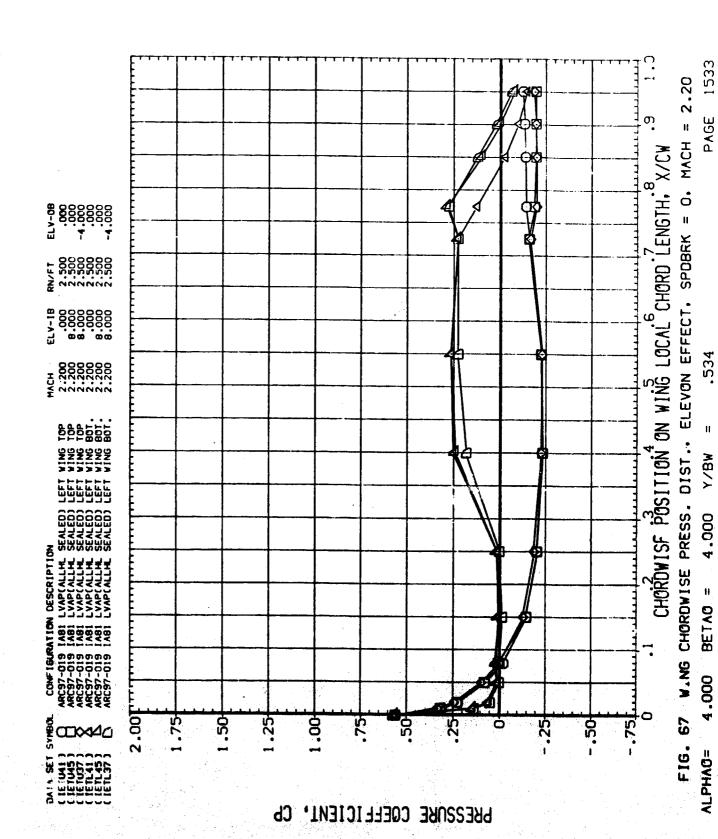
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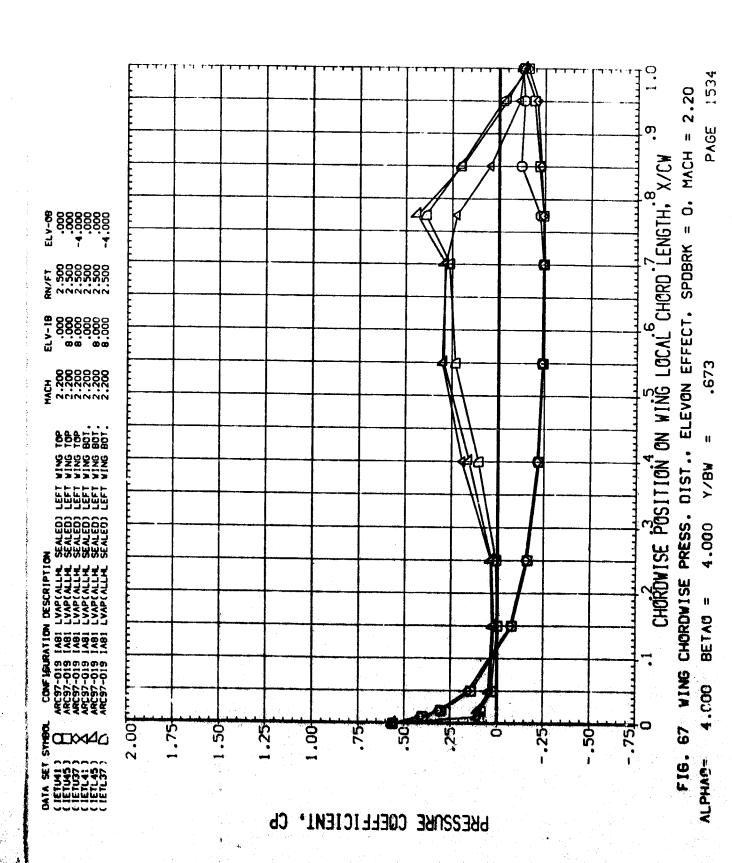
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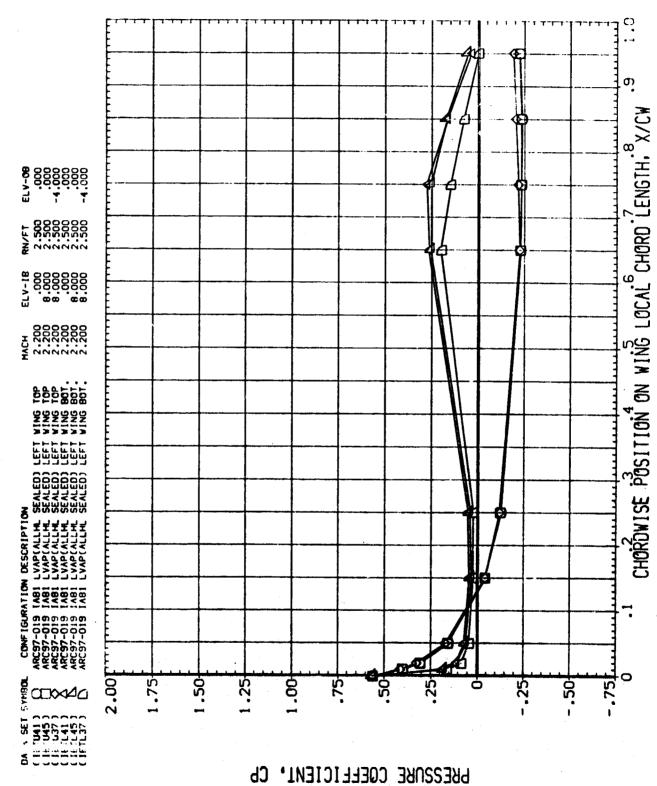
PRESSURE COEFFICIENT, CP



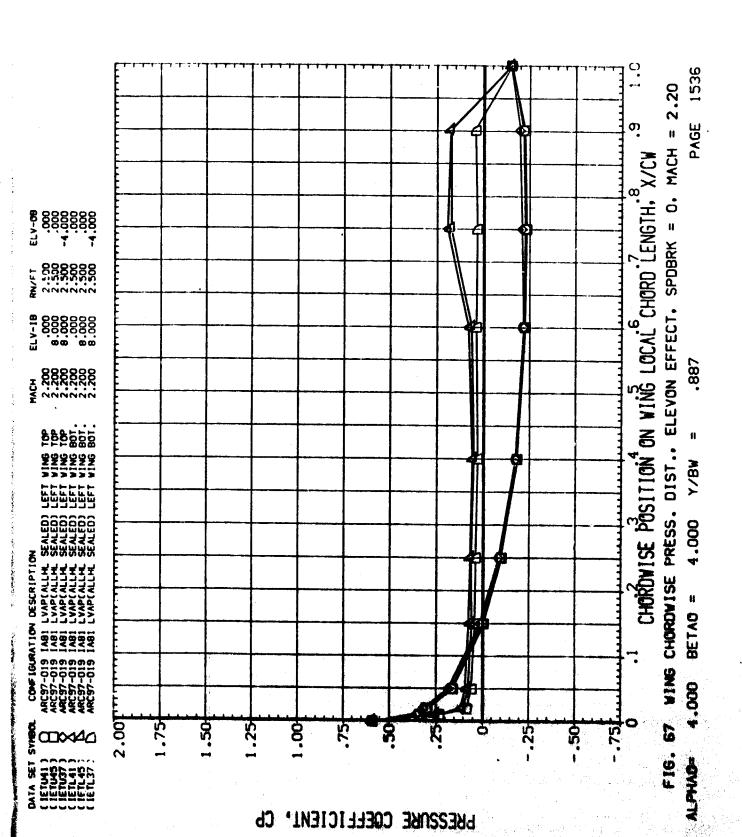
WING CHURDWISE PRESS. DIST., ELEVON EFFECT, SPDBRK = 0, MACH = 2.20 Y/BW 4.000 BETAO = 4.000 F16. 67 ALPHAG=

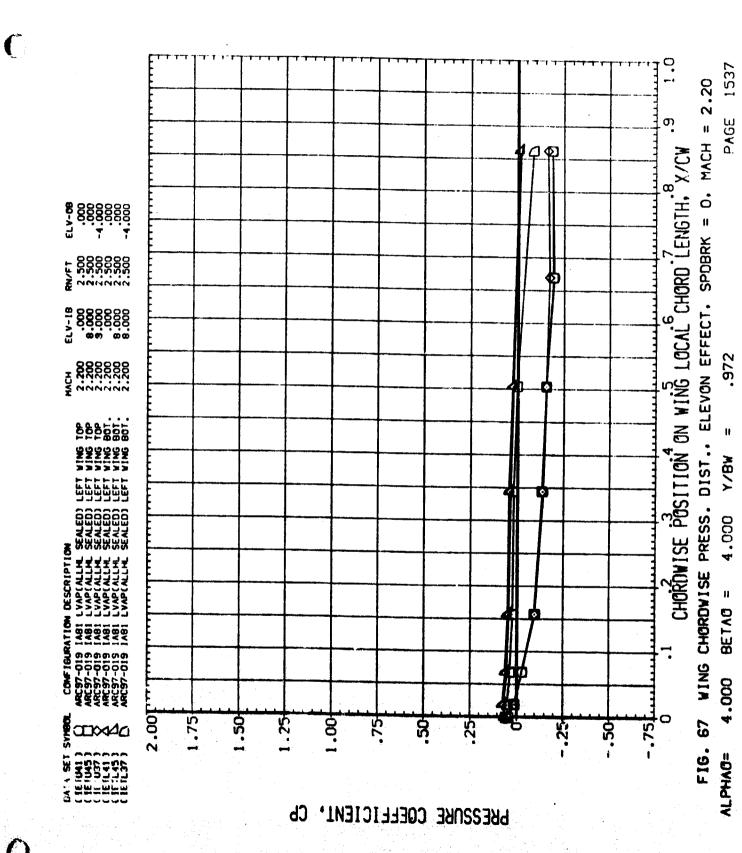






WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPDBRK = 0. MACH = 2.20 Y/BW 4.000 BETAO 4.000 FIG. 87 ALPHAG=





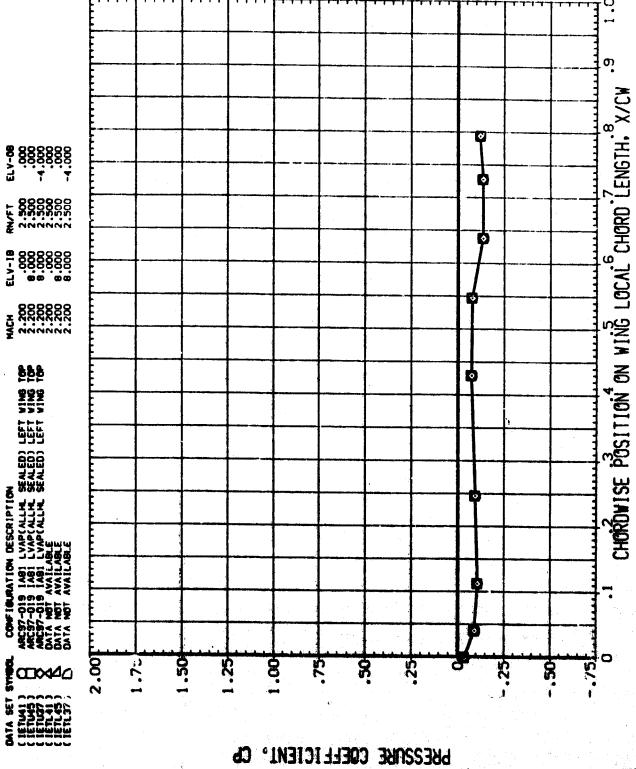
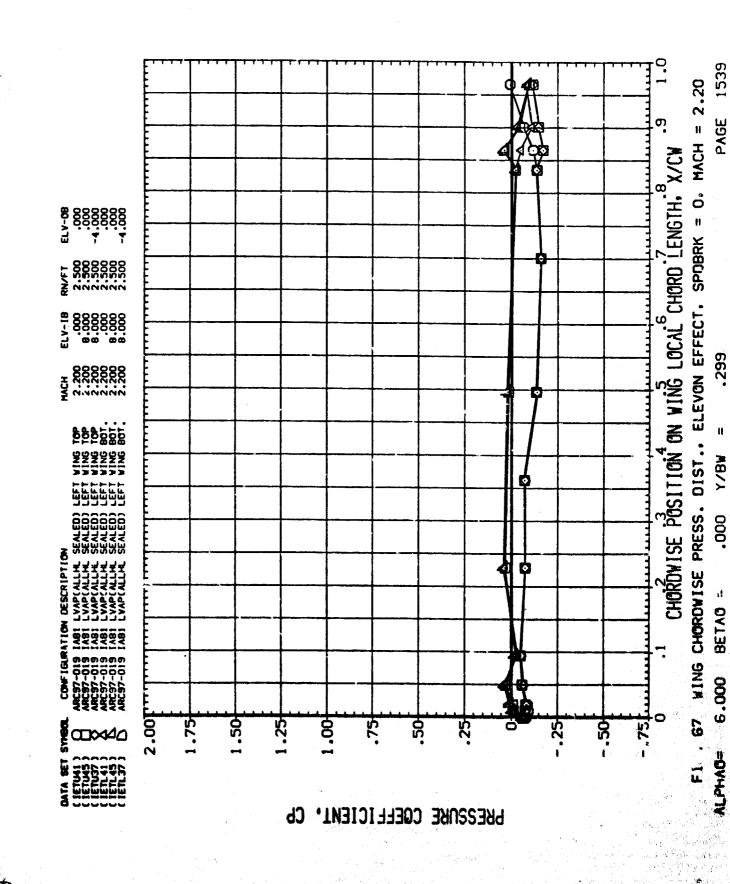
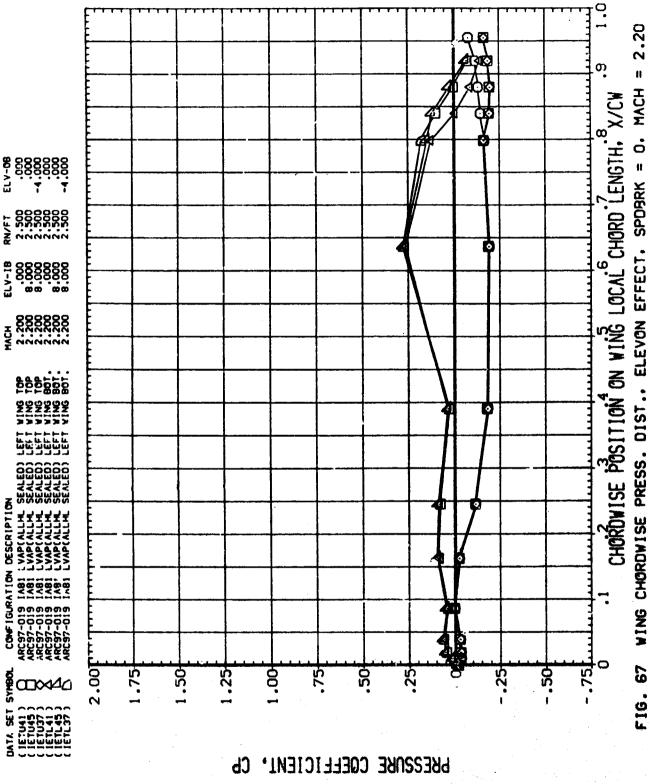


FIG. 67 WING CHOROWISE PRESS. DIST., ELEVON EFFECT. SPUBRK = 0. MACH = 2.20 Y/BW 000. BETAG 6.000 ALPHAD=





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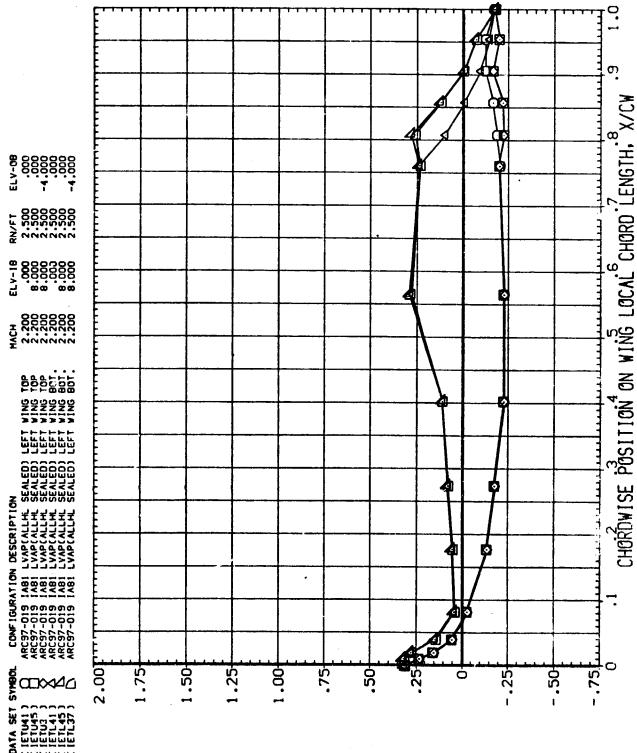
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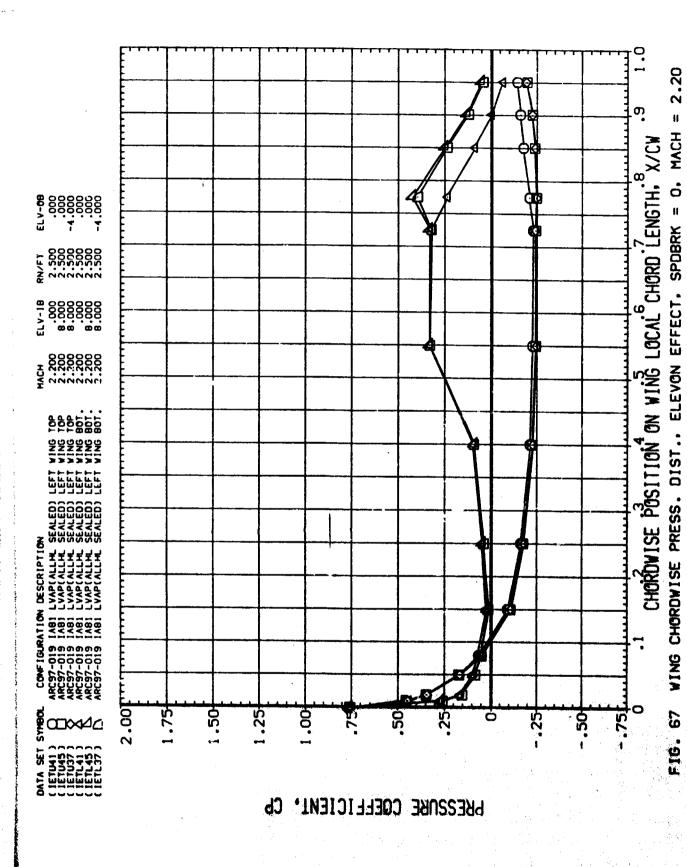
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WING CHORDWISE PRESS. DIST., ELEVON EFFECT, SPOBRK = 0, MACH = 2.20 FIG. 67

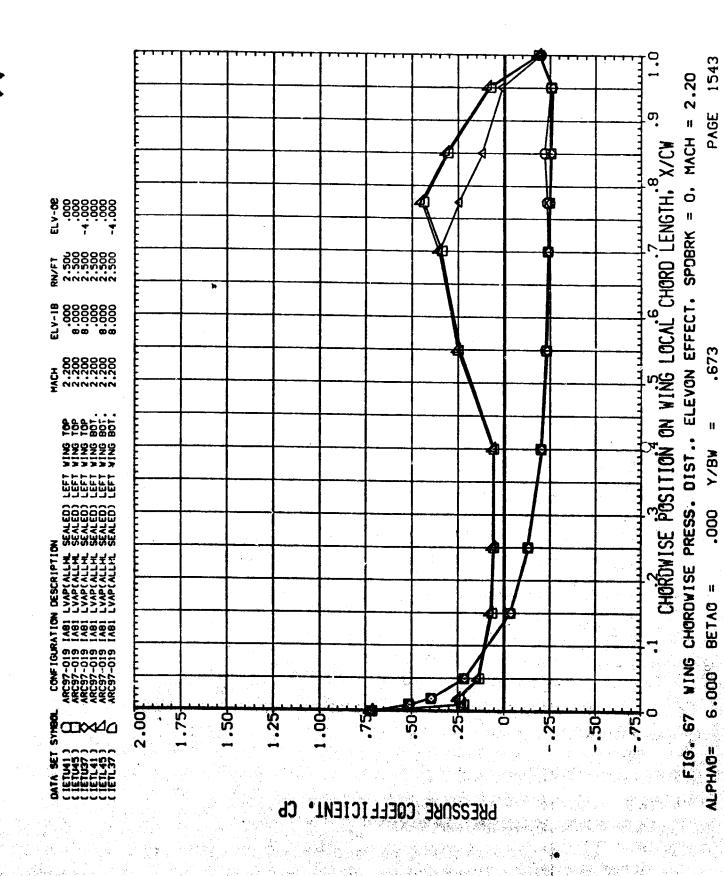


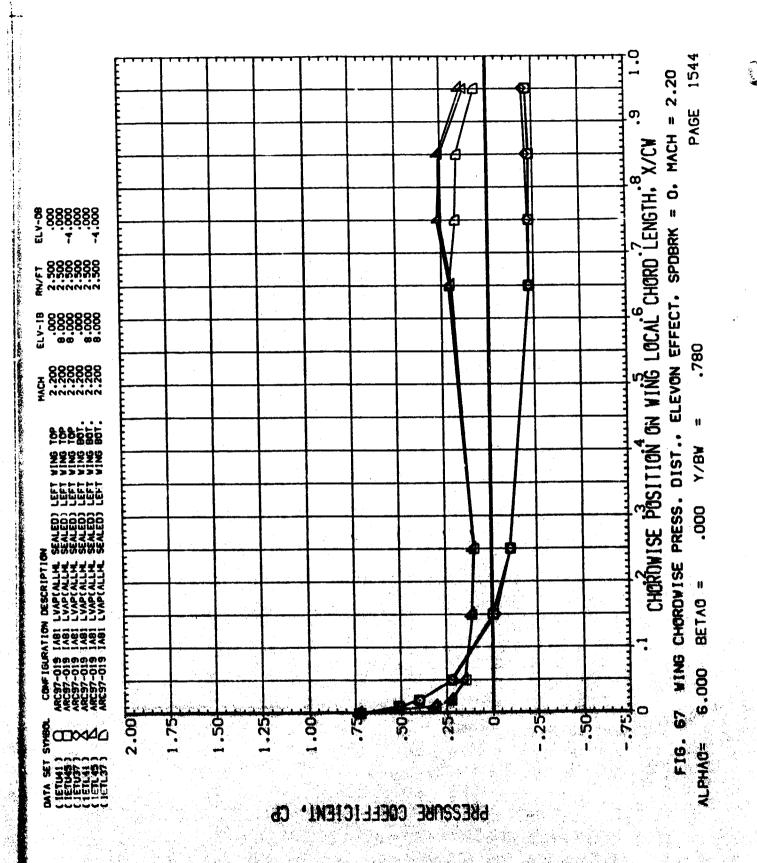
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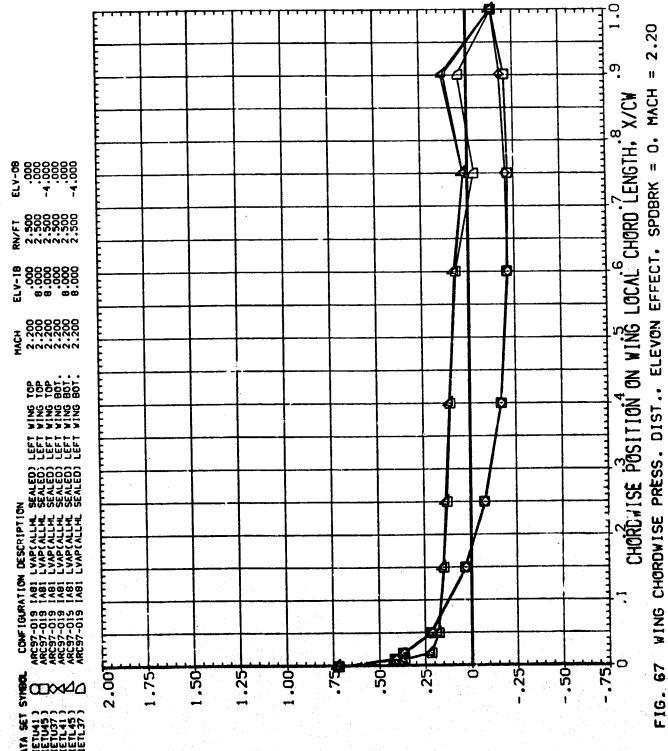
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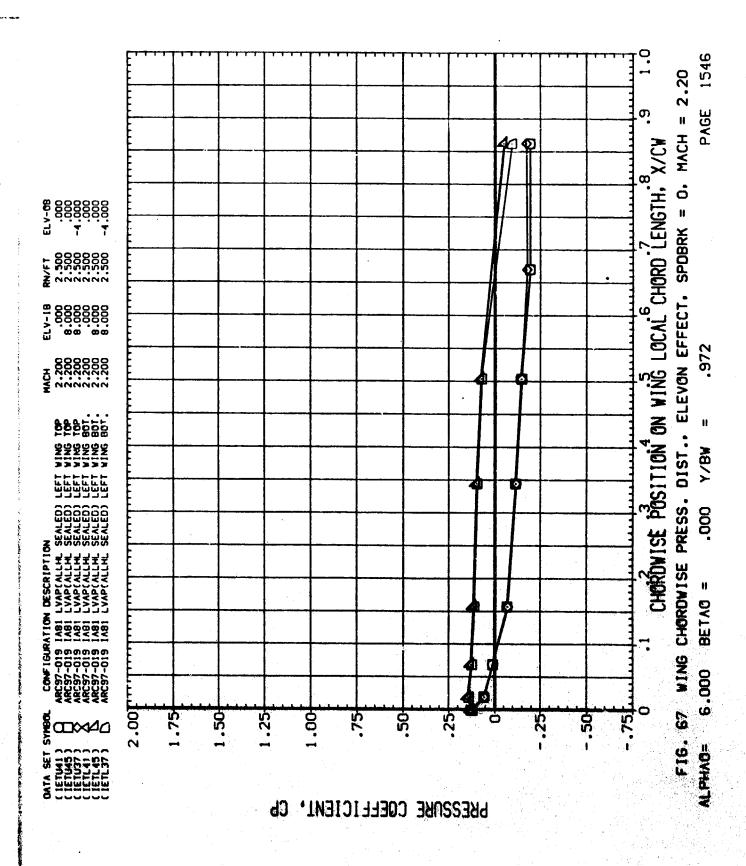
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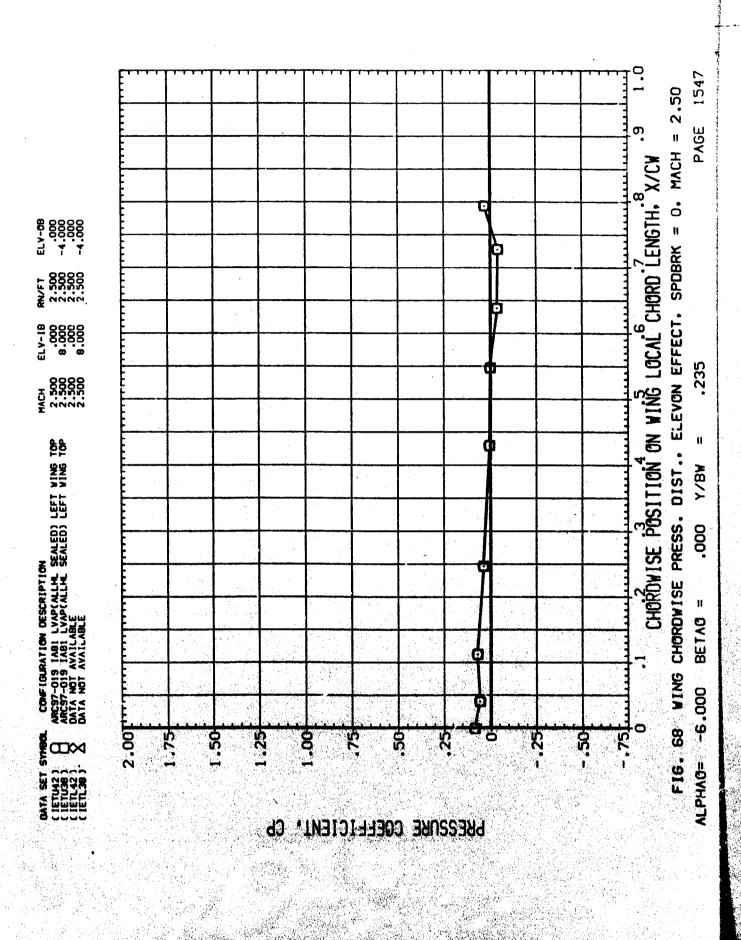






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4444 60000 F 00000 8.000 6.000 6.000 6.000 6.000 9000 1000 1000 1000 9999 8888 8888 CONFIGURATION DESCRIPTION
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ARCS7-019 1A81 LVAP(ALLH, SEALED)
ARCS7-019 1A81 LVAP(ALLH, SEALED)
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FIG. 68 WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPOBRK = 0. MACH = 2.50 CHORDWISE POSITION ON WING LOCAL CHORD LENGTH, 8X/CW

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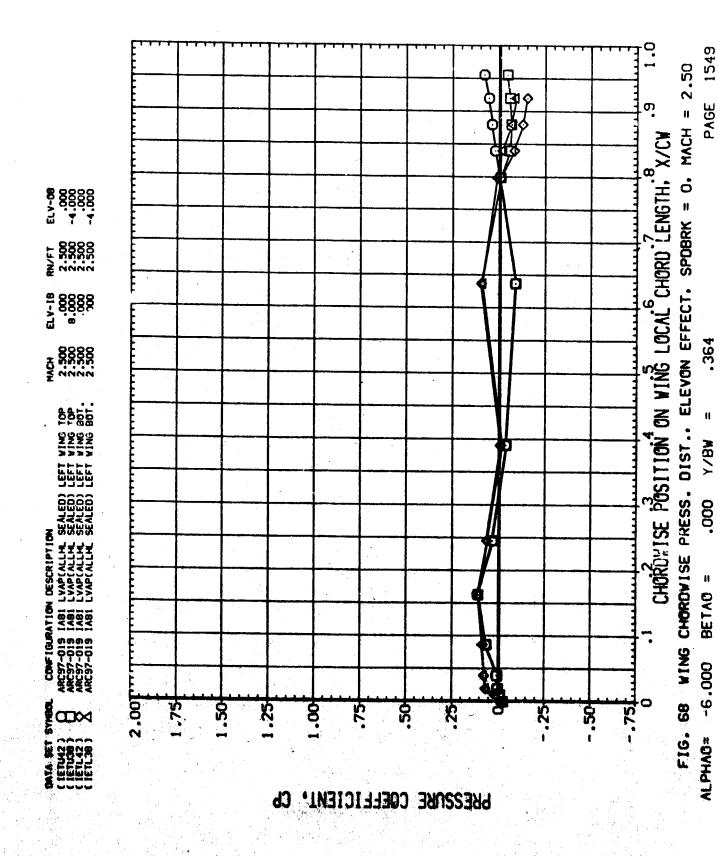
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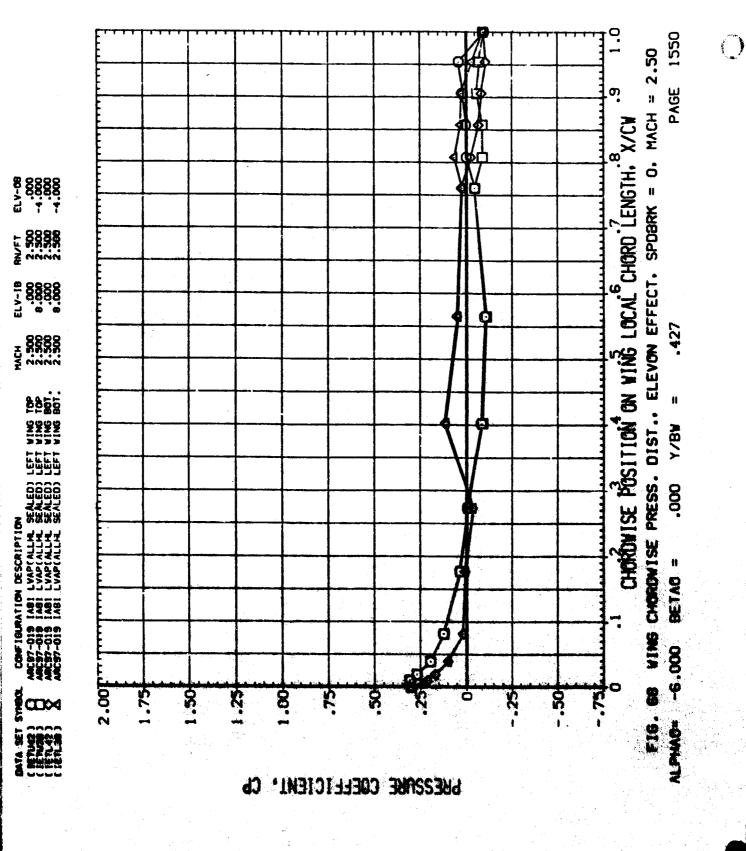
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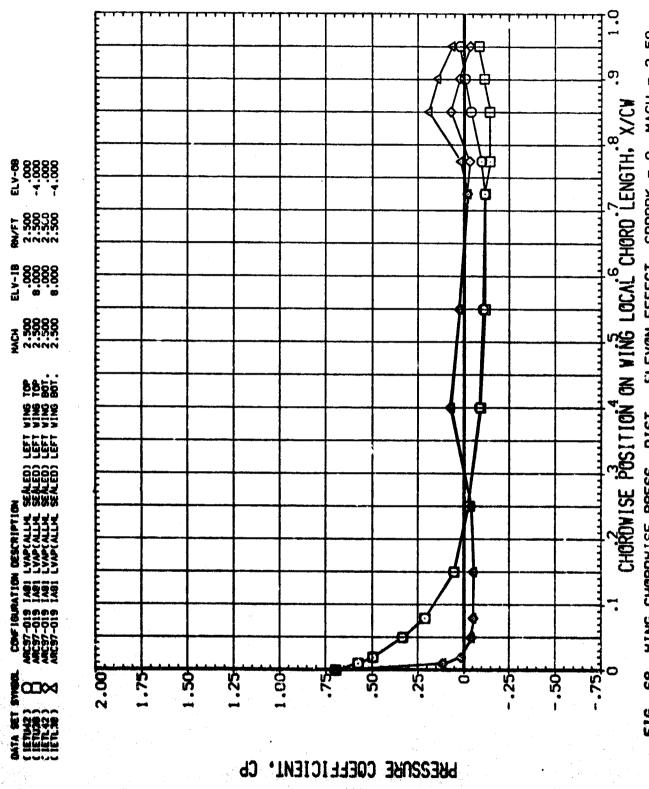


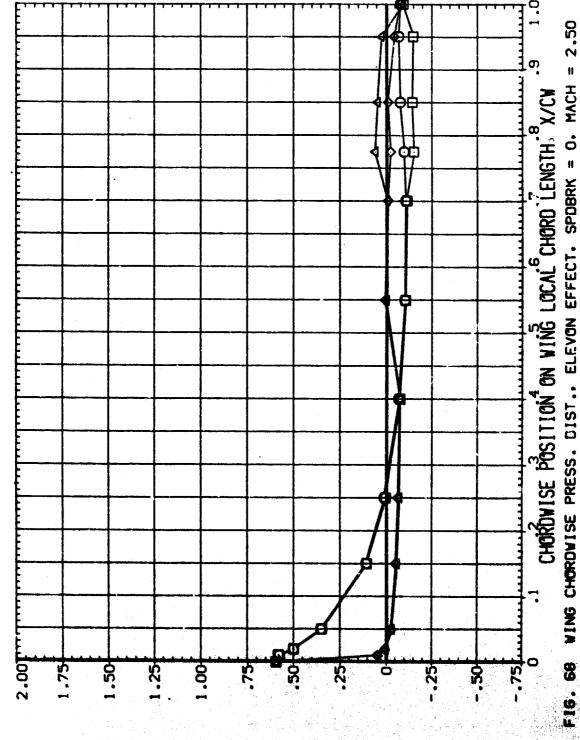
FIG. 68 WING CHOROWISE PRESS. DIST., ELEVON EFFECT, SPOBRK = 0, MACH = 2.50 000. BETAG =

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PAGE 1551



PRESSURE COEFFICIENT, CP

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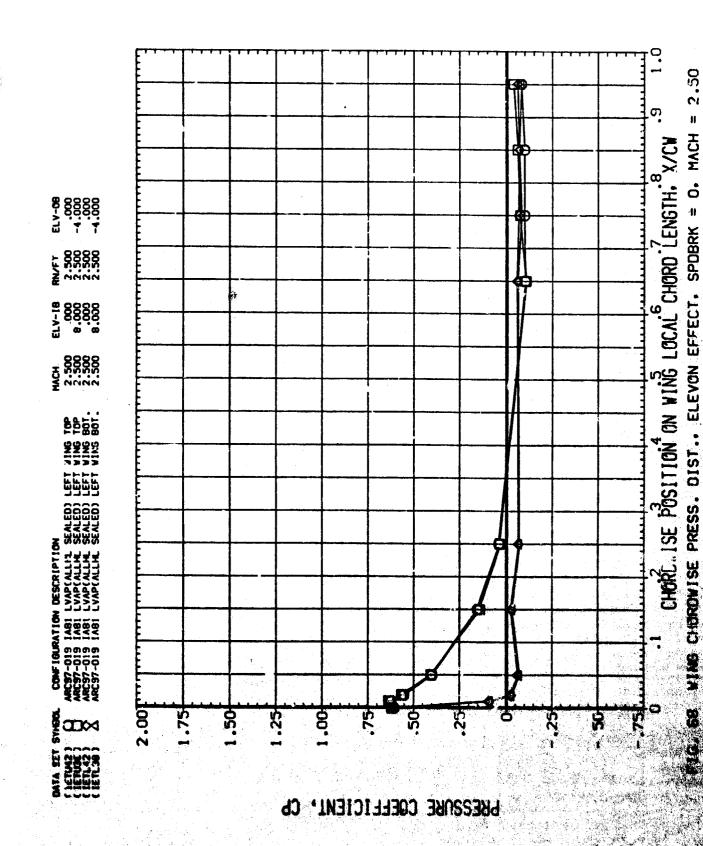
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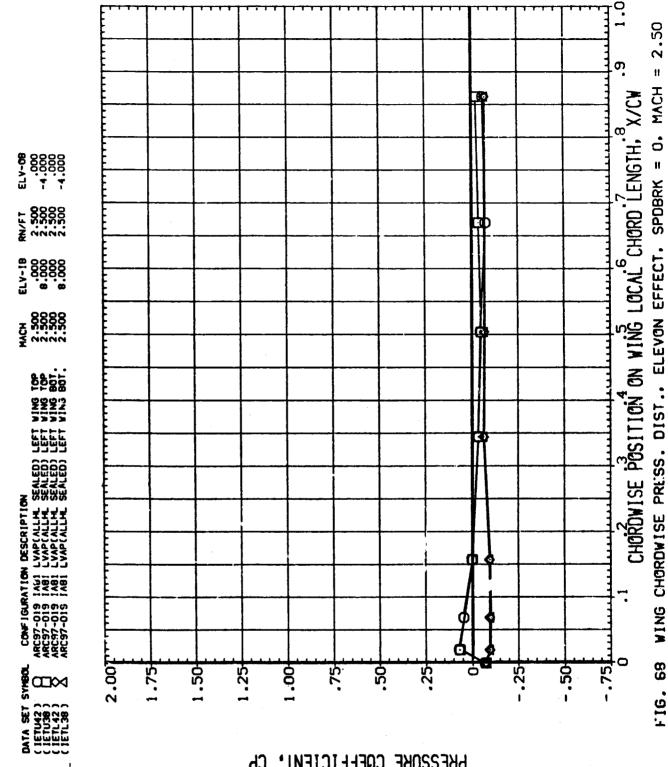
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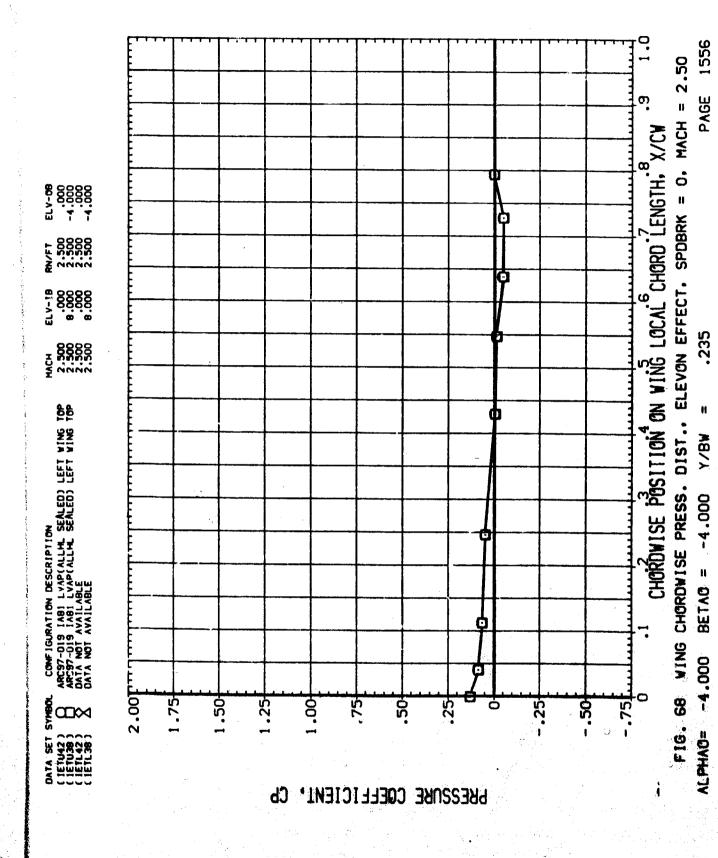
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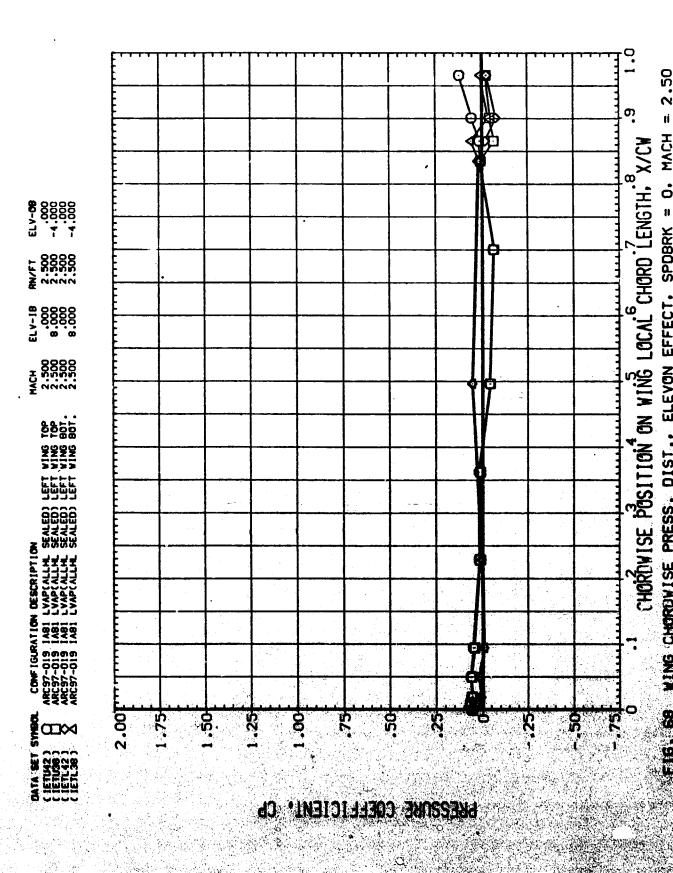
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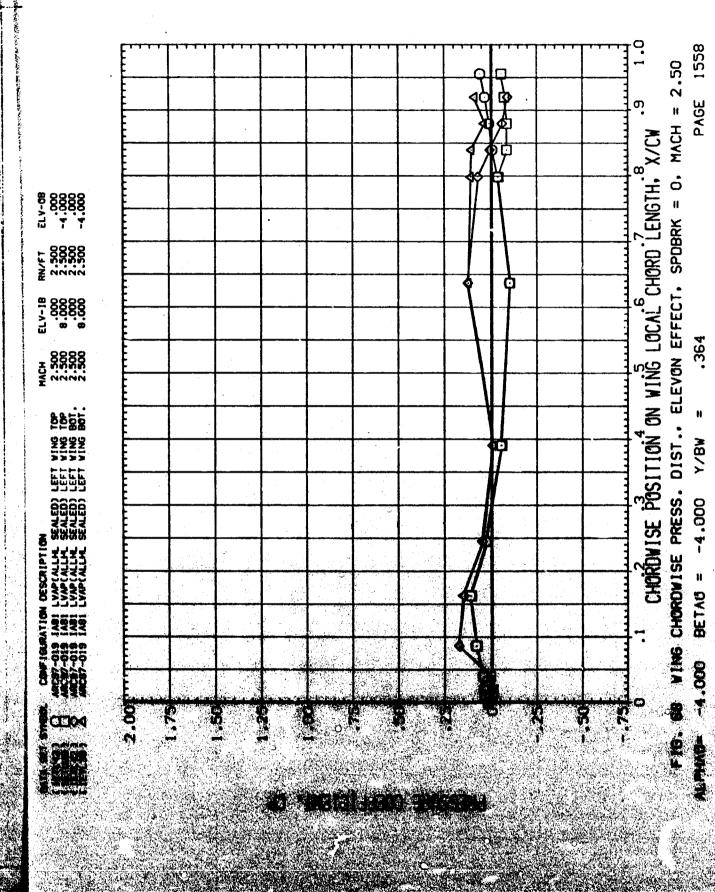
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<u></u> თ CHORDWISE POSITION ON WING LOCAL CHORD LENGTH; X/CW FLV-08 -4.000 -4.000 22.500 22.500 25.500 500 500 500 8.000 8.000 8.000 8.000 ARC97-019 IA81 LVAP(ALLH, SEALED) LEFT WING TOP ARC97-019 IA81 LVAP(ALLH, SEALED) LEFT WING TOP ARC97-019 IA81 LVAP(ALLH, SEALED) LEFT WING BOT. ARC97-019 IA81 LVAP(ALLH, SEALED) LEFT WING BOT. CONFIGURATION DESCRIPTION 2.00FTT 1.75 .. 0 75. -.25 1.50 1.25 -.50 $\square \bowtie$ (IETU42) (IETU38) (IETL42) (IETL38) PRESSURE COEFFICIENT,

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FIG. 68 WING CHORDWISE PRESS. DIST., ELEVON EFFECT, SPOBRK = 0. MACH = 2.50

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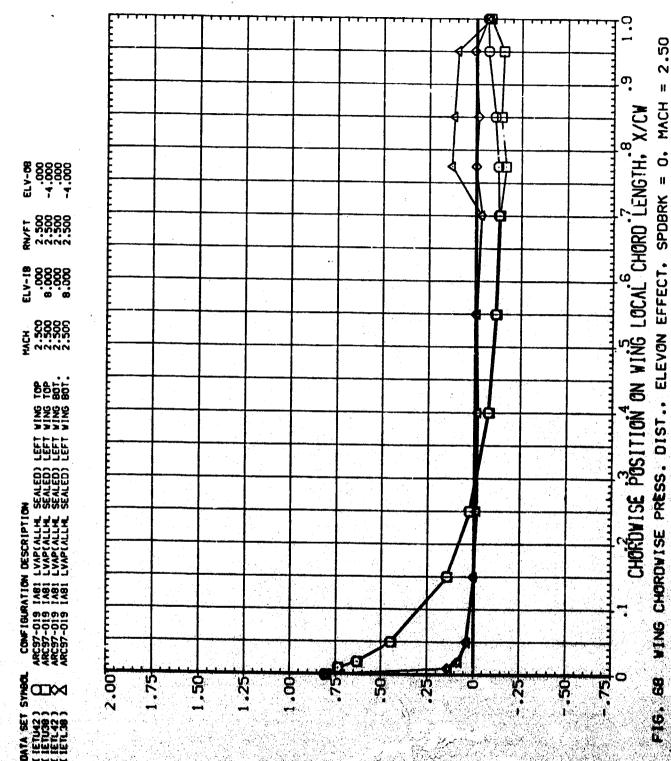
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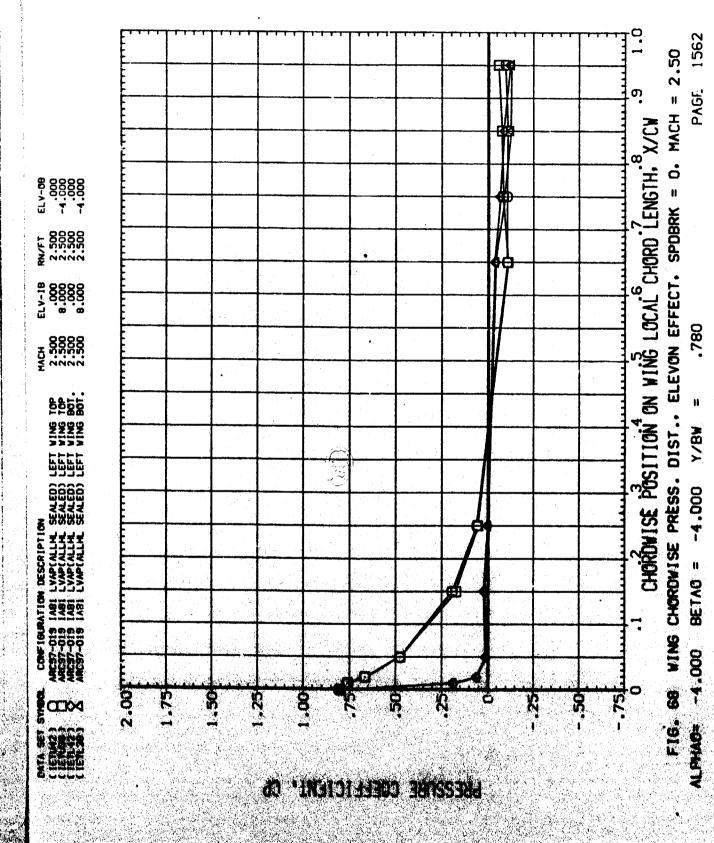
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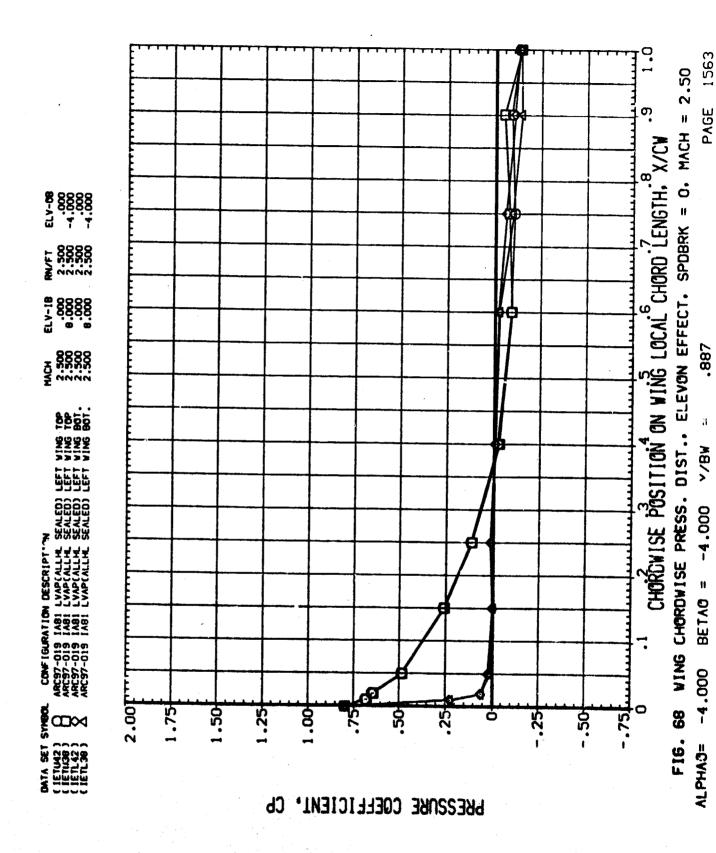
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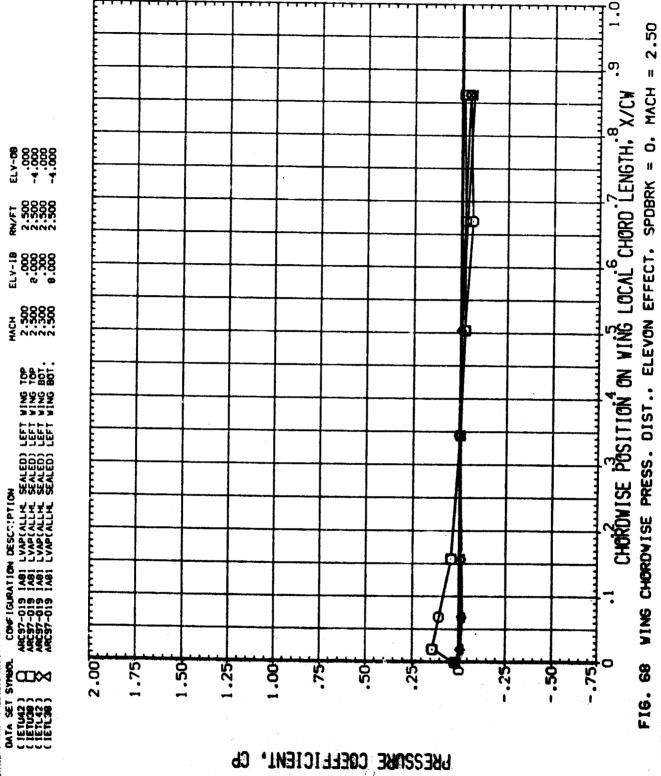


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FIG. 68 WING CHORDWISE PRESS. DIST., ELEVON EFFECT, SPOBRK = 0, MACH = 2.50 CHORDWISE POSITION ON WING LOCAL CHORD LENGTH; X/CW ELV-08 -4.000 -4.000 þ þ ELV-18 .000 8.000 8.000 74.4 2.500 2.500 2.500 2.500 3 ARCG7-019 1A81 LVAP(ALLH SEALED) LEFT WING TOP ARCG7-019 IA81 LVAP(ALLH SEALED) LEFT WING TOP TAX NOT AVXILABLE DATA NOT AVXILABLE DATA NOT AVXILABLE þ 2.00FTT 9 1.75 50 -.75 . 50A 1.25 <u>용</u> - 50 PRESSURE COEFFICIENT,

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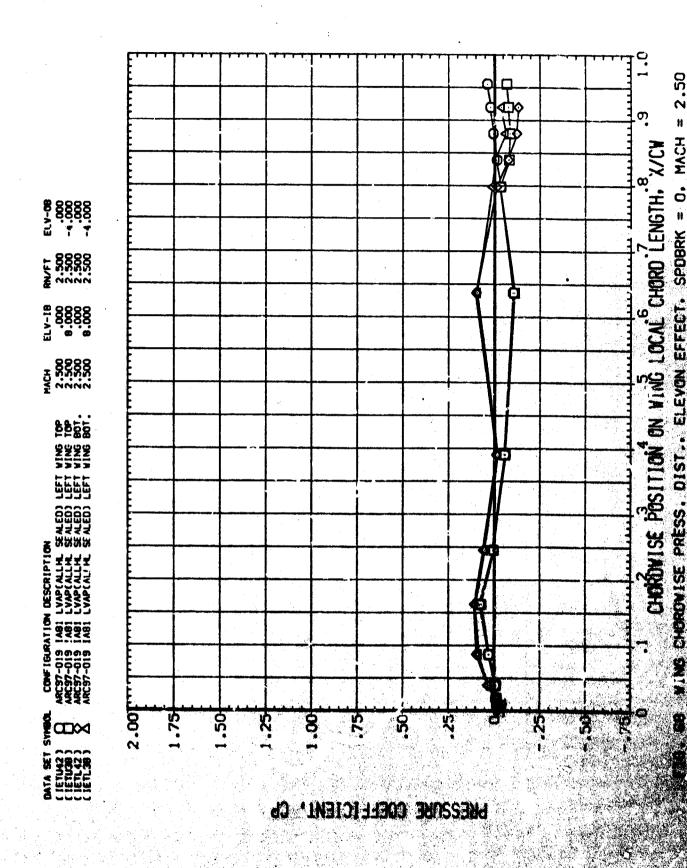
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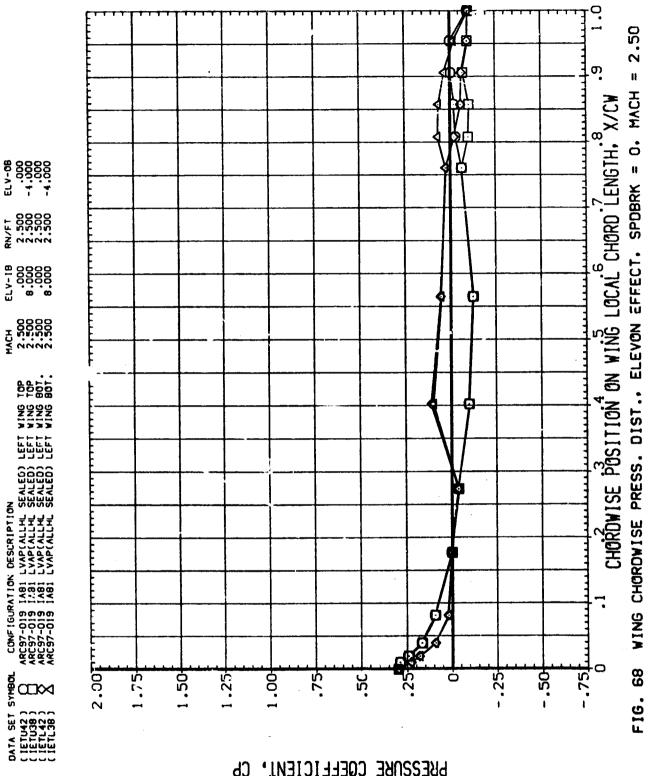
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PAGE 1566 0 FIG. 68 WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPDBRK = 0. MACH = 2.50 თ. CHORDWISE POSITION ON WING LOCAL CHORD LENGTH, 8X/CW ELV-08 .000 -4.000 8.000 8.000 8.000 VING TOP VING TOP VING BOT. Y/BW 1 LVAPCALIA, SEALED) LI 1 LVAPCALIA, SEALED) LI 1 LVAPCALIA, SEALED) LI 1 LVAPCALIA, SEALED) LI 80. BETAG = ARC97-019 I ARC97-019 I ARC97-019 I ARC97-019 I 7LPHAD= -4.000 2.00FTT Ř œ 1.75 1.50 1.23 1.00 8 -.25 13 C (ETU42) C (ETU38) C (ETU38) C (ETC38) PRESSURE COEFFICIENT, CP



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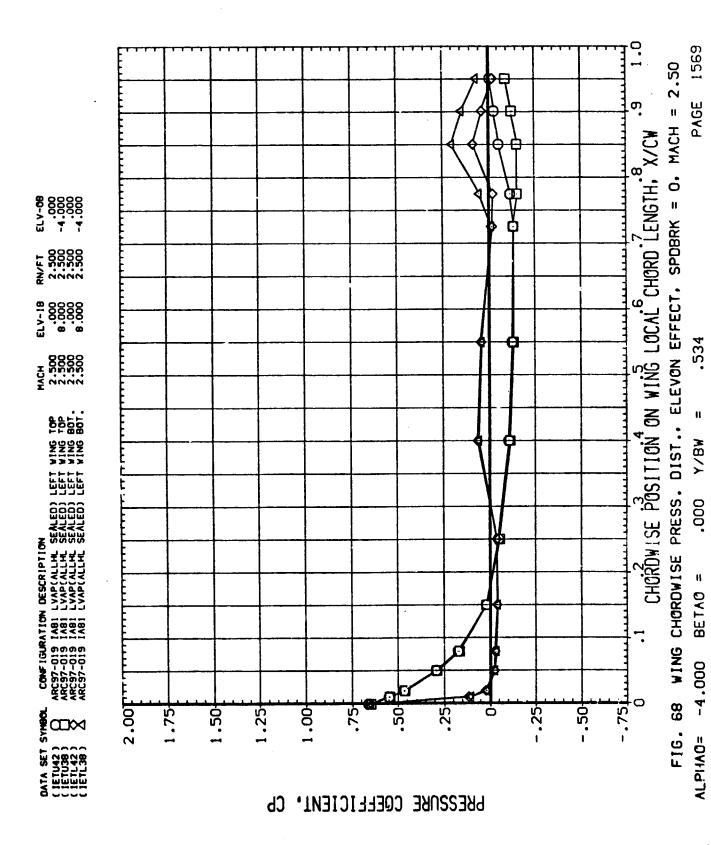
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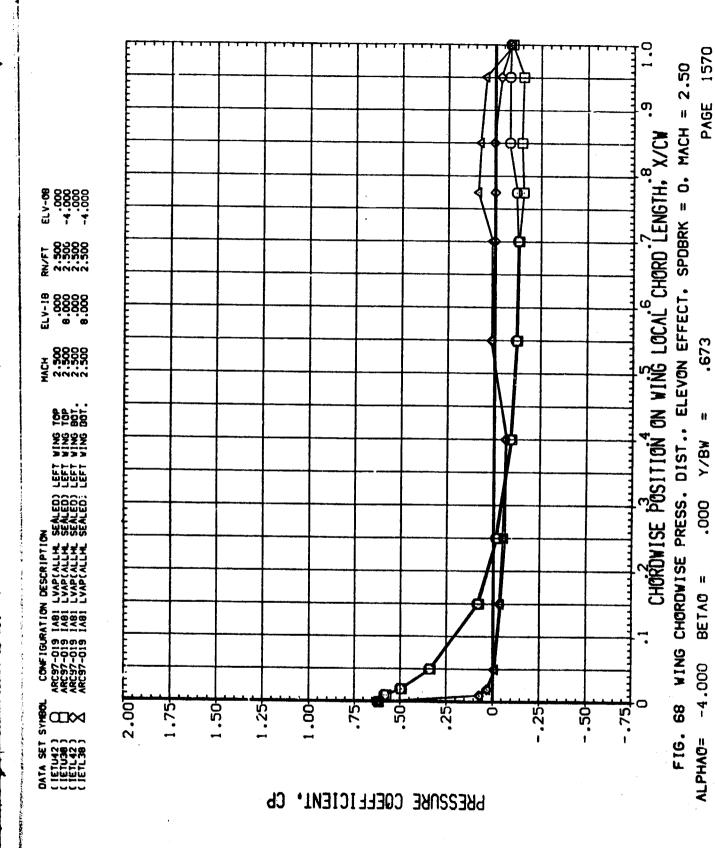
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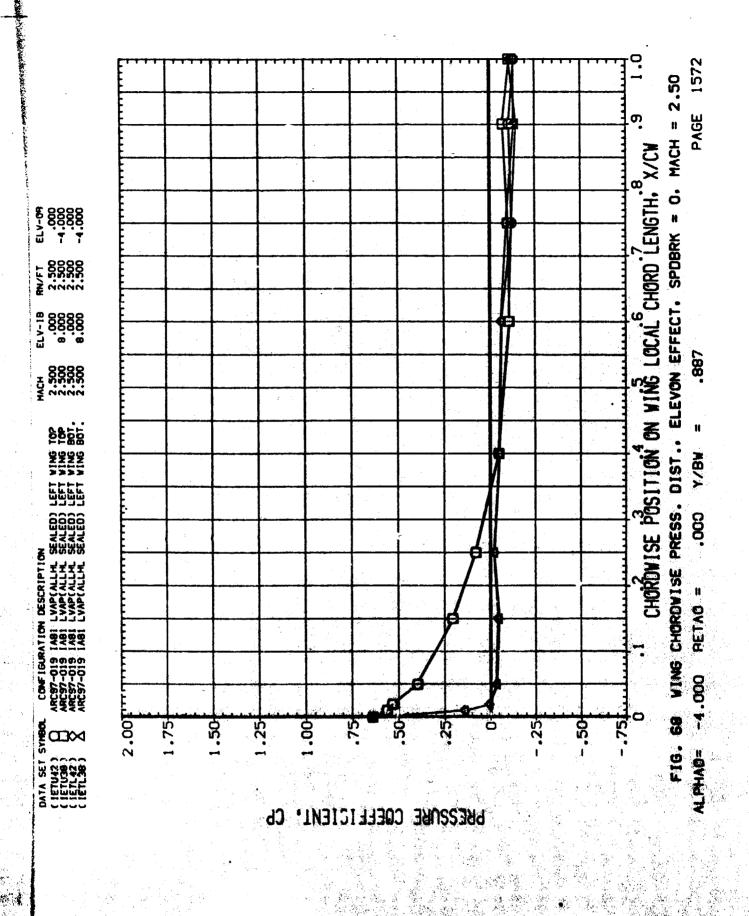


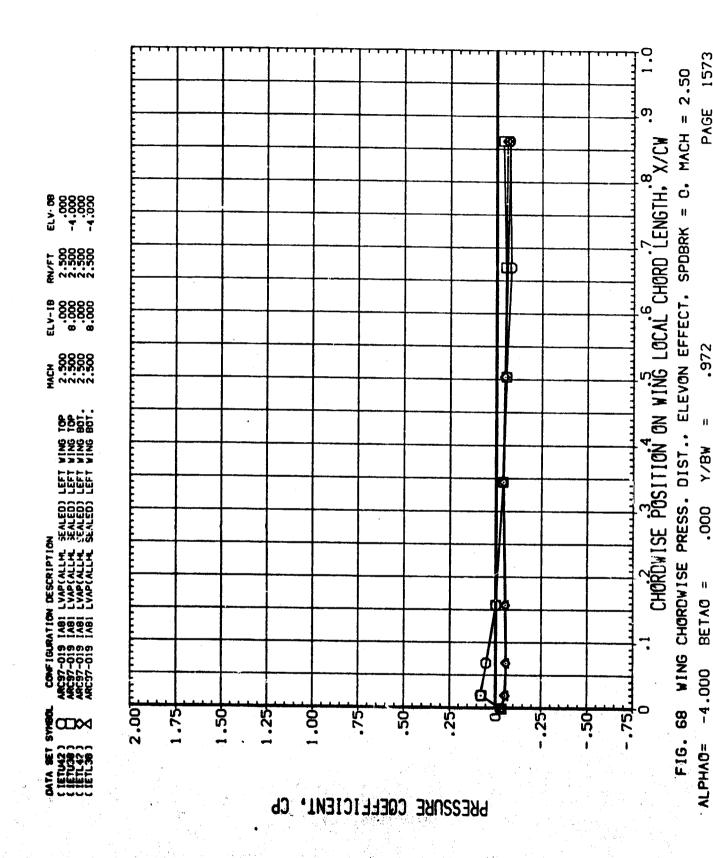
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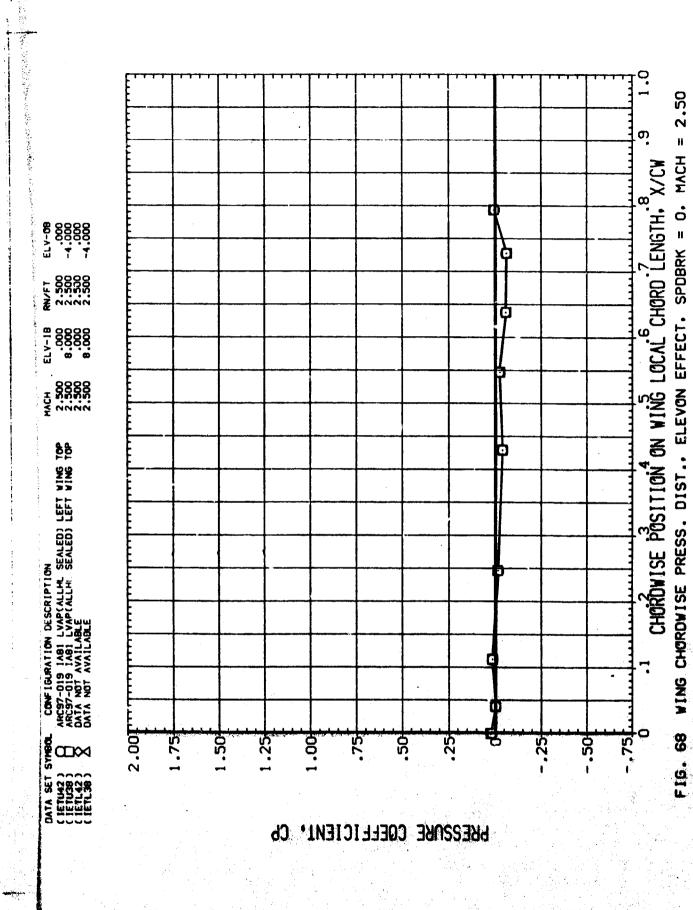
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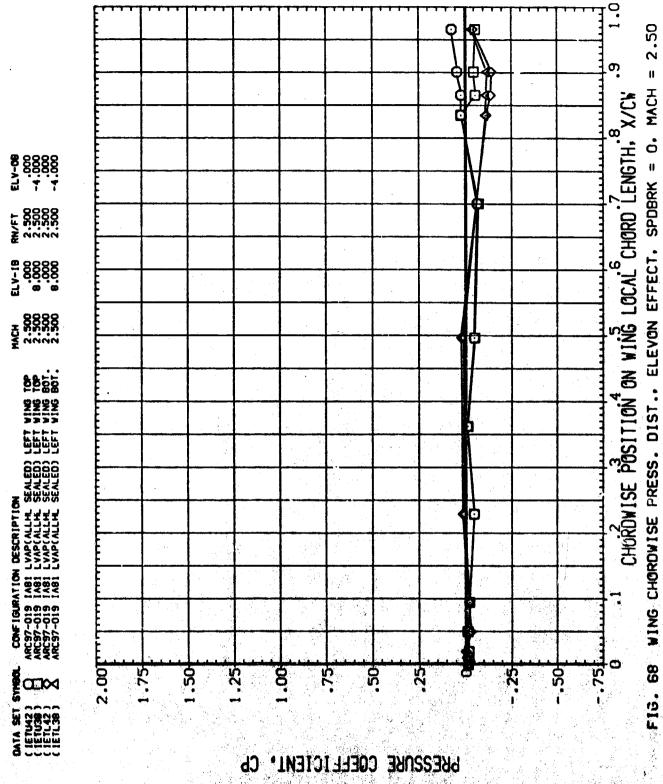
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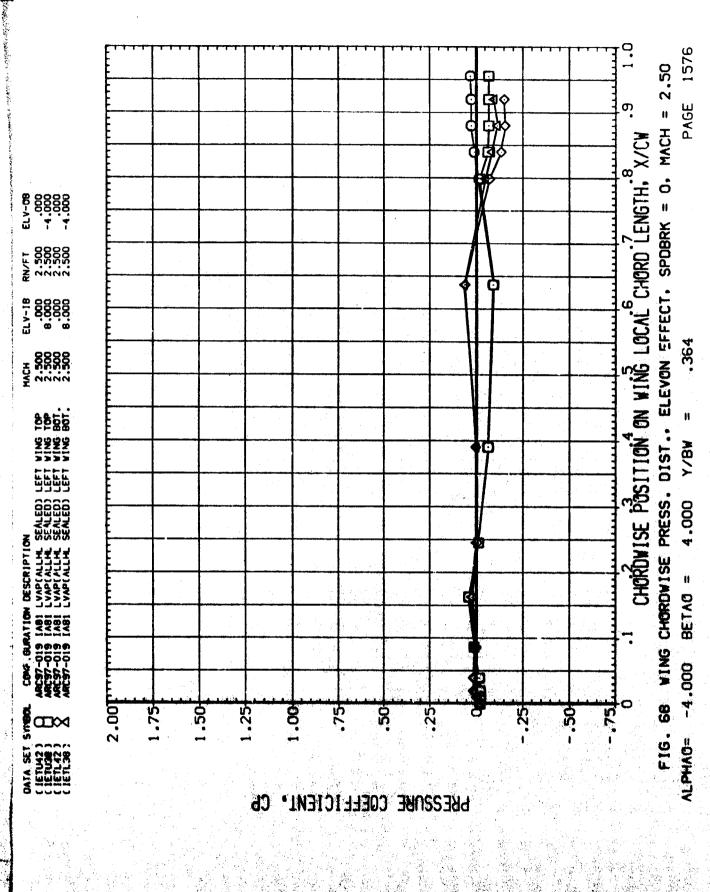
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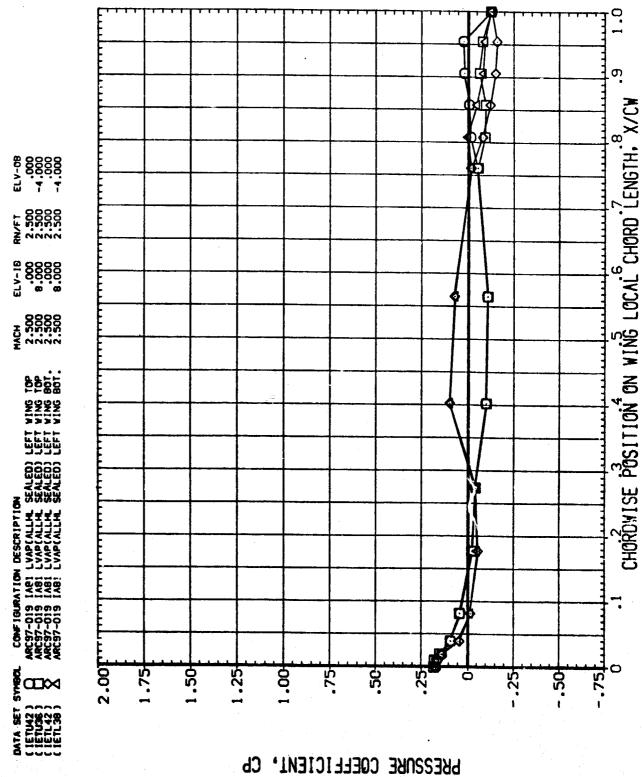


FIG. 68 WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPUBRK = 0. MACH = 2.50

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PAGF 1577

1.0 1578 FIG. 68 WING CHORDWISE PRESS. DIST., ELEVON EFFECT, SPDBRK = 0. MACH = 2.50 PAGE CHORDWISE POSITION ON WING LOCAL CHORD LENGTH: X/CW ELV-08 -4:000 -4:000 2.500 2.500 2.500 2.500 CONFIGURATION DESCRIPTION
ARC97-019 1A81 LVAP(ALLM SEALED) LEFT WING TOP
ARC97-019 1A81 LVAP(ALLM SEALED) LEFT WING TOP
ARC97-019 1A81 LVAP(ALLM SEALED) LEFT WING BOT. Y/BW 4.000 BETAG = -4.000 2.00 FTT -.75 -.25 1.75 1.50 .23 90. .75 50 ∞ ALPHAD= (167042) (167042) (167042) (167042) PRESSURE COEFFICIENT, **d**0

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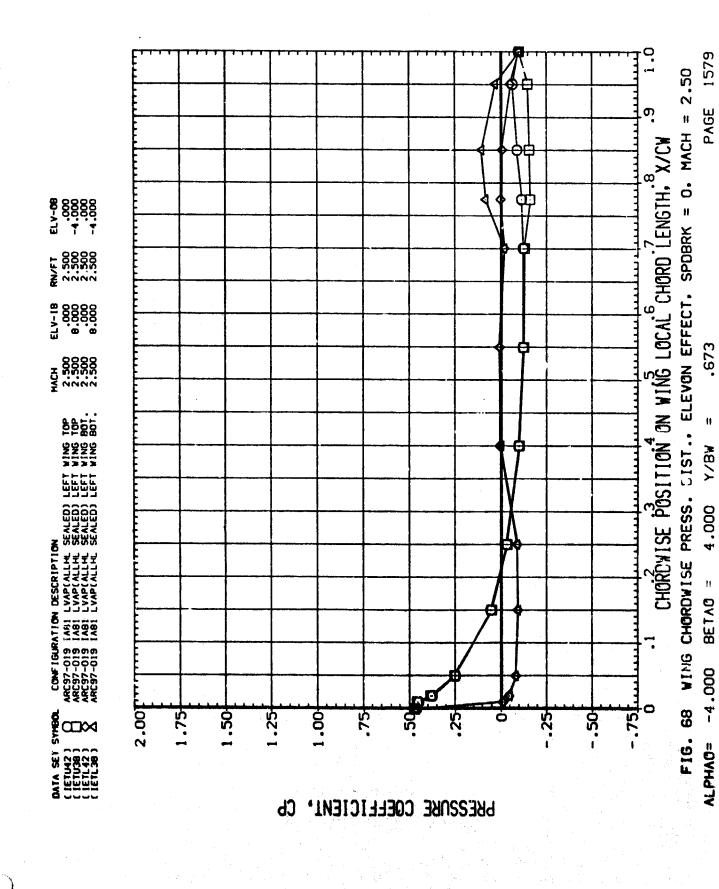
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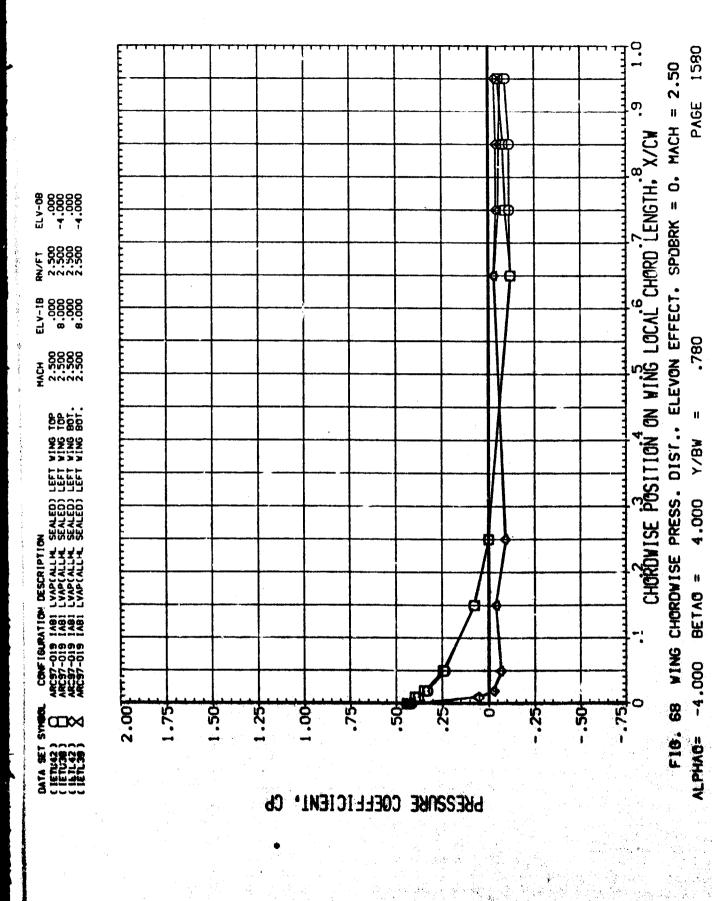
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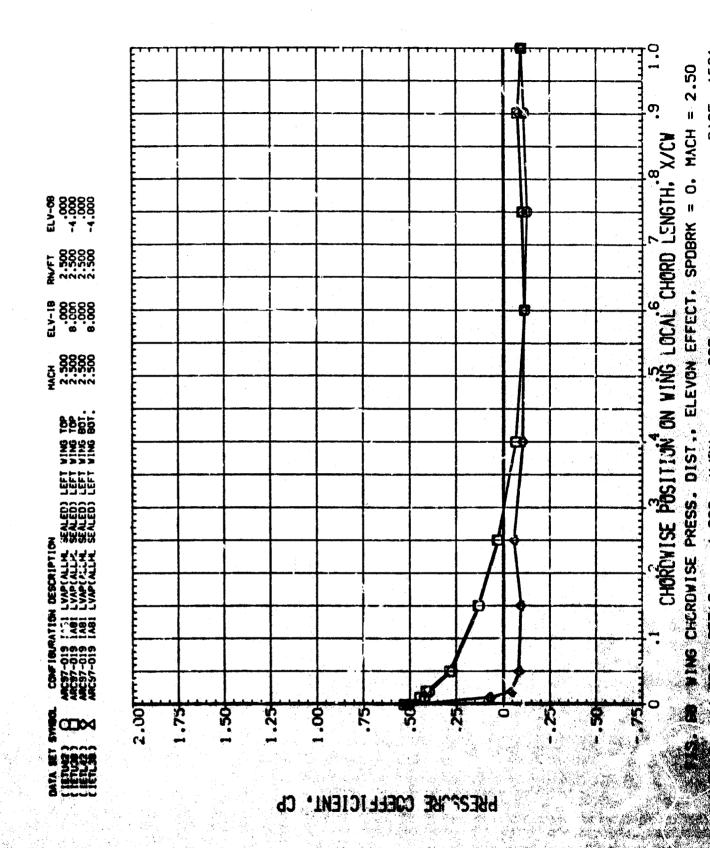
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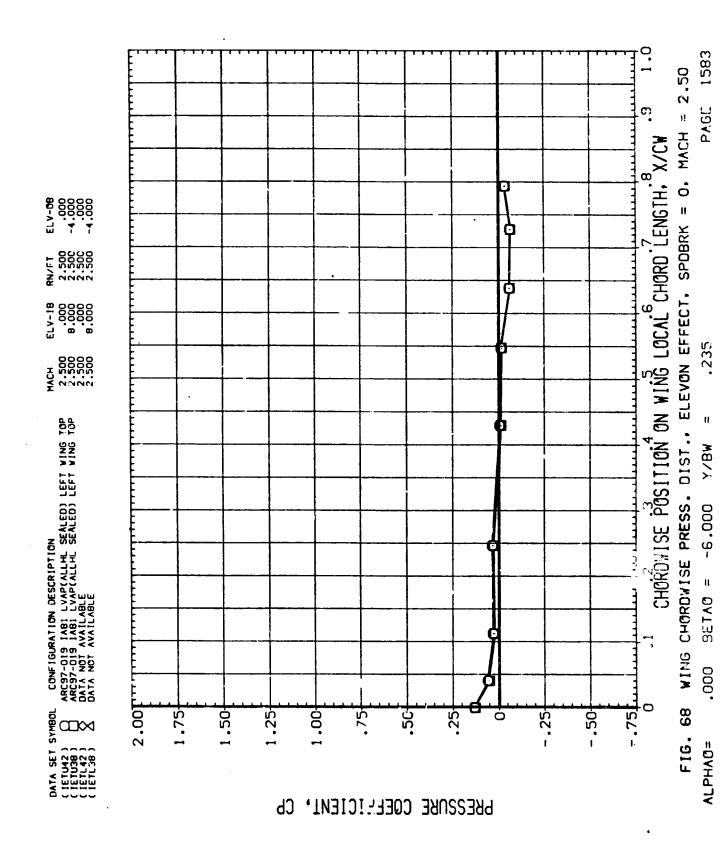
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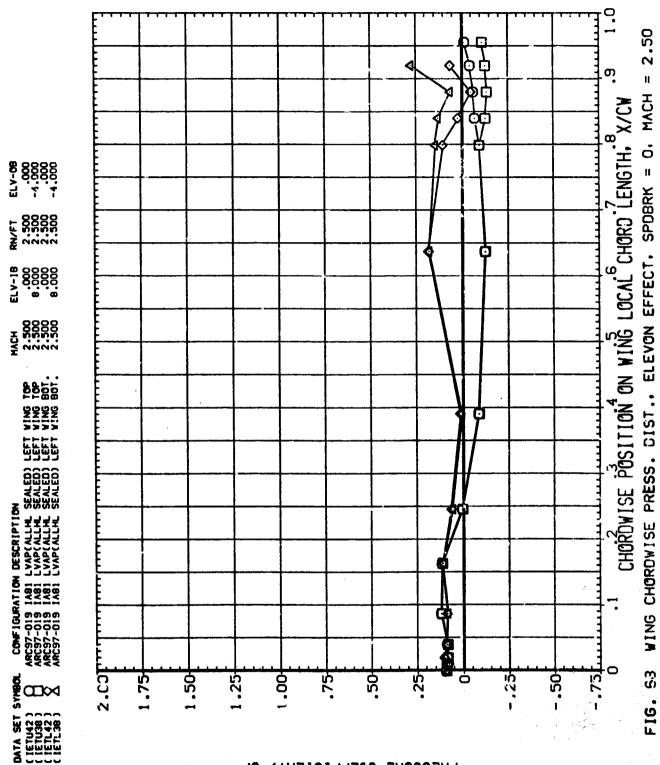




0. FIG. 68 WING CHORDWISE PRESS. DIST., ELEVON EFFECT, SPOBRK = 0, MACH = 2.50 PAGE CHORDWISE POSITION ON WING LOCAL CHORD LENGTH; X/CW **I** ELV-08 -4:000 ф ELV-18 9.000 9.000 8.000 .972 ARCGT-019 (ABI LVAPIALLH SEALED) LEFT WING TOP ARCGT-019 (AB LVAPIALLH SEALED) (FFT WING TOP ARCGT-019 (ABI LVAPIALLH STALED) LEFT WING BOT ARCGT-019 (ABI LVAPIALLH STALED) LEFT WING BOT. Y/BW 4.000 CONFIGURATION DESCRIPTION BETAO = -4.000 2.00FTT 1.75 8 .25 1.50 .75 DATA SET SYMBOL .50 25 .25 -.50 -.75 ΢4 (.ETU42) (.ETU38) (.ETL42) (.ETL38) ALPHA0= PRESSURE COEFFICIENT,



PAGE 1584 WING CHORDWISE PRESS. DIST., ELEVEN EFFECT, SPDBRK = 0. MACH = 2.50 CHORDWISE POSITION ON WING LUCAL CHORD LENGTH, X/CW ELV-08 .000 -4.000 -4.000 2.500 2.500 2.500 2.500 2.500 ELV-18 .000 8.000 8.000 CONFIGURATION DESCRIPTION
ARC97-019 1A81 LVAP(ALLHL SEALED) LEFT WING TOP
ARC97-019 1A81 LVAP(ALLHL SEALED) LEFT WING TOP
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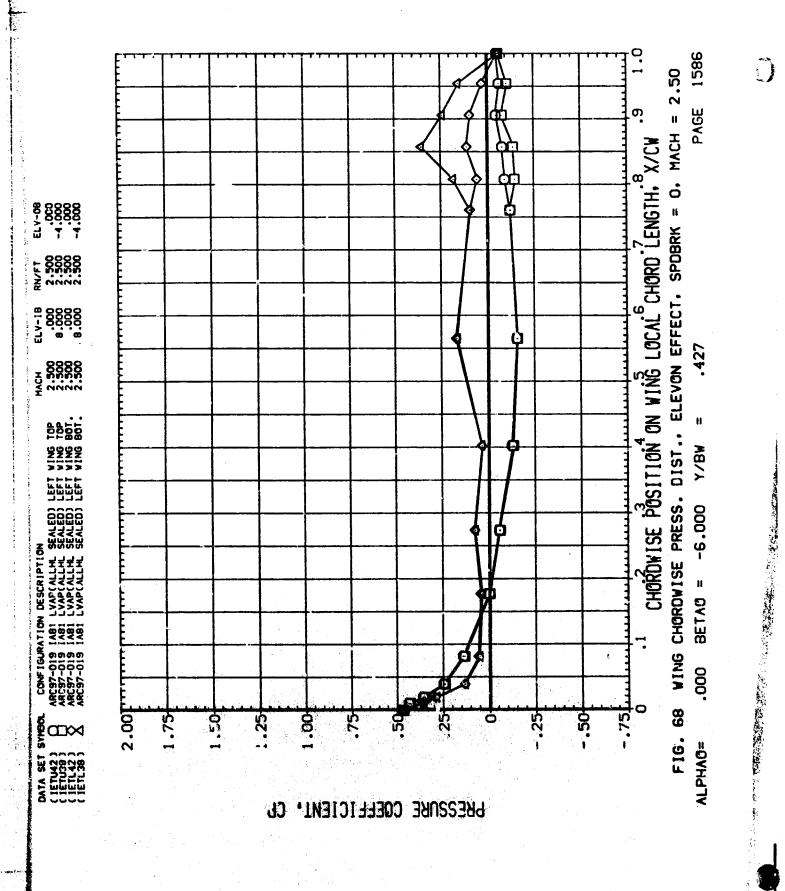
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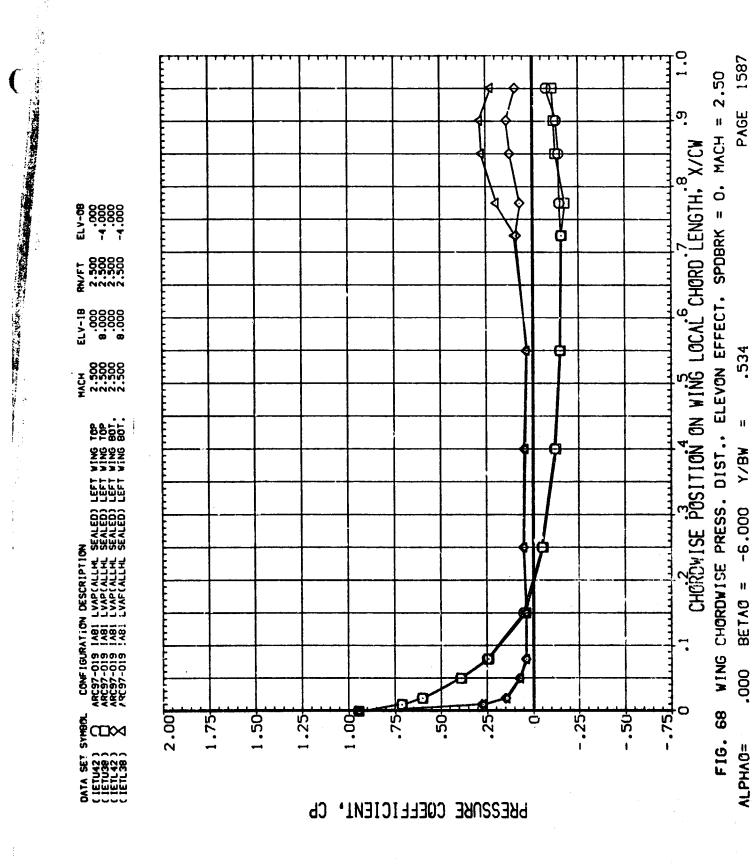
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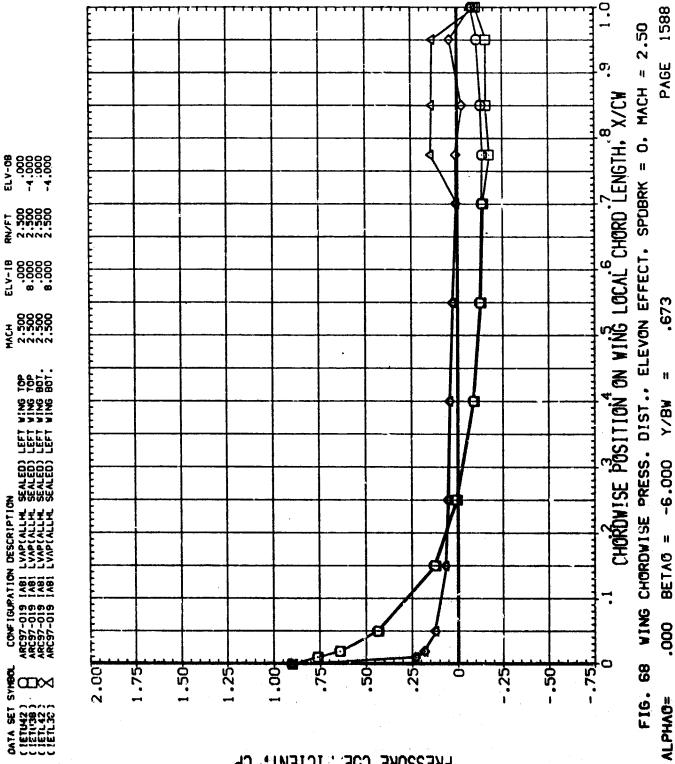
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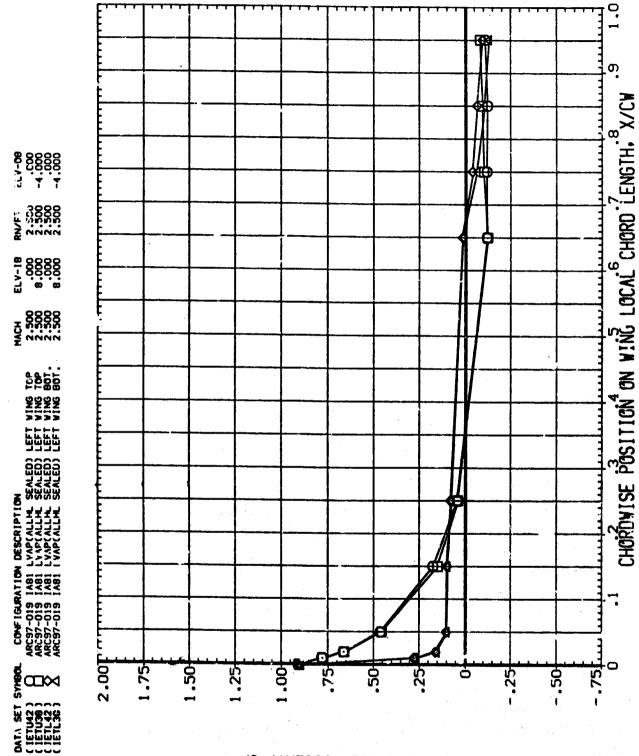




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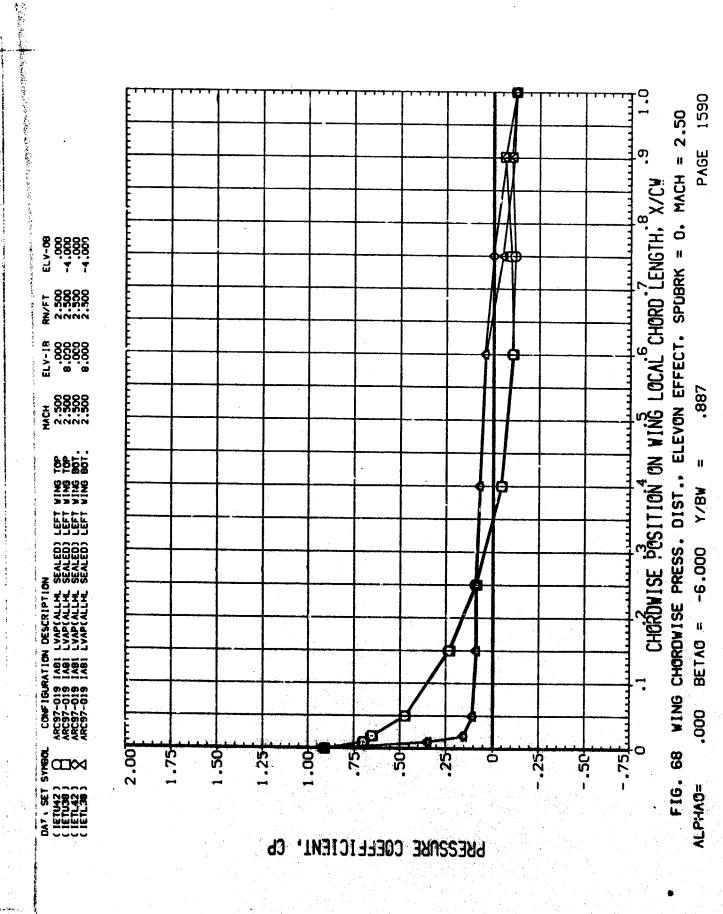
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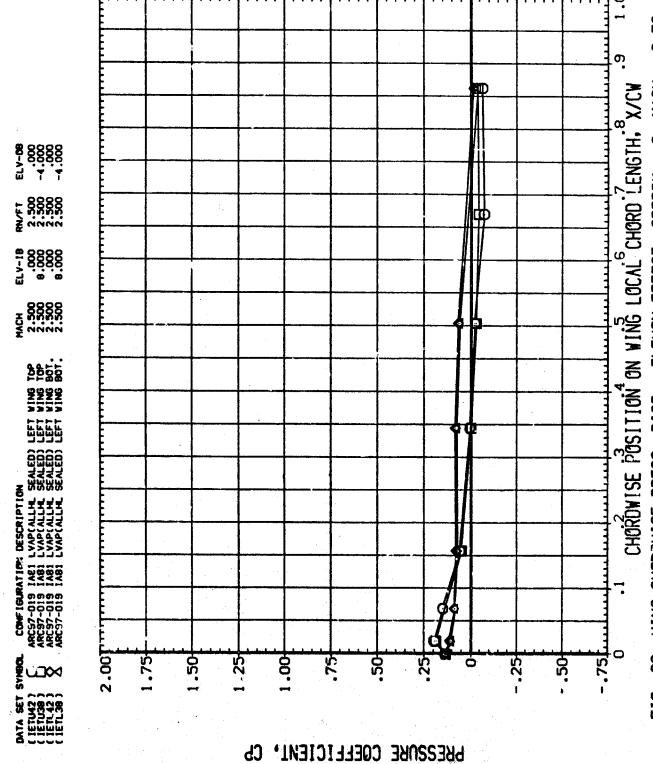
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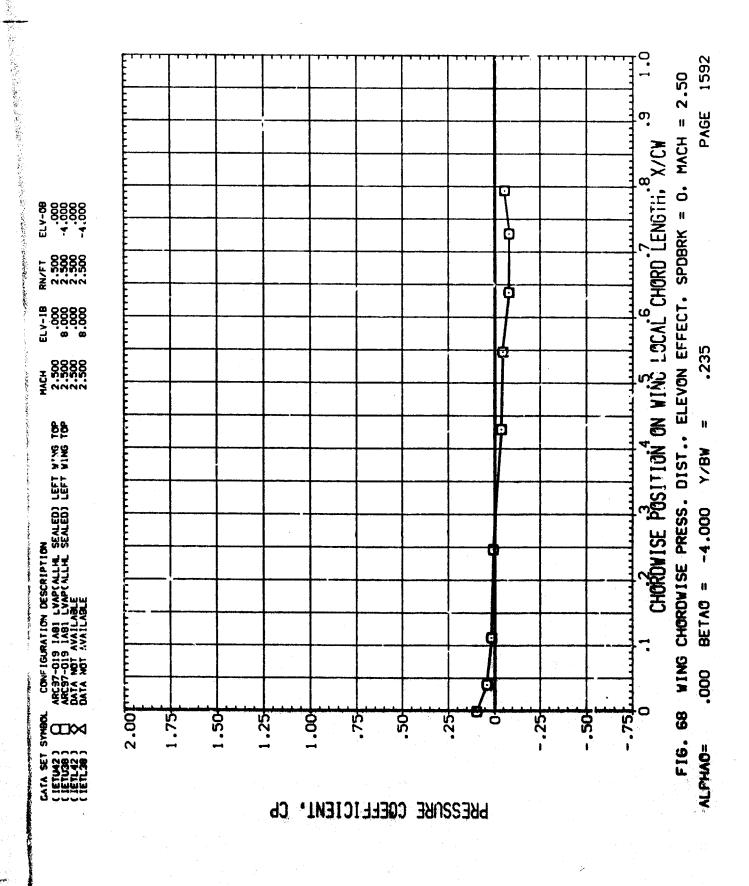
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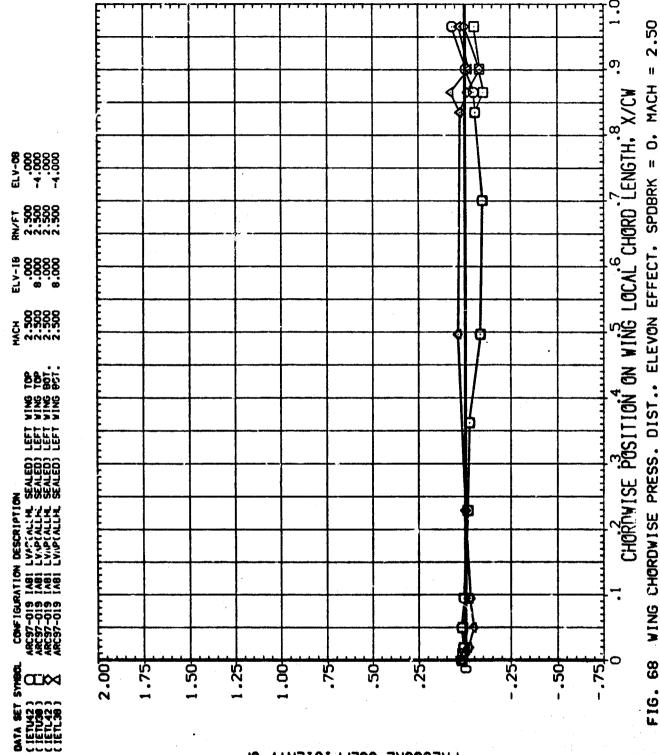
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PAGE 1591 FIG. 68 WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPOBRK = 0. MACH = 2.50 Y/BW -6.000 BETAS = ALPHAG=





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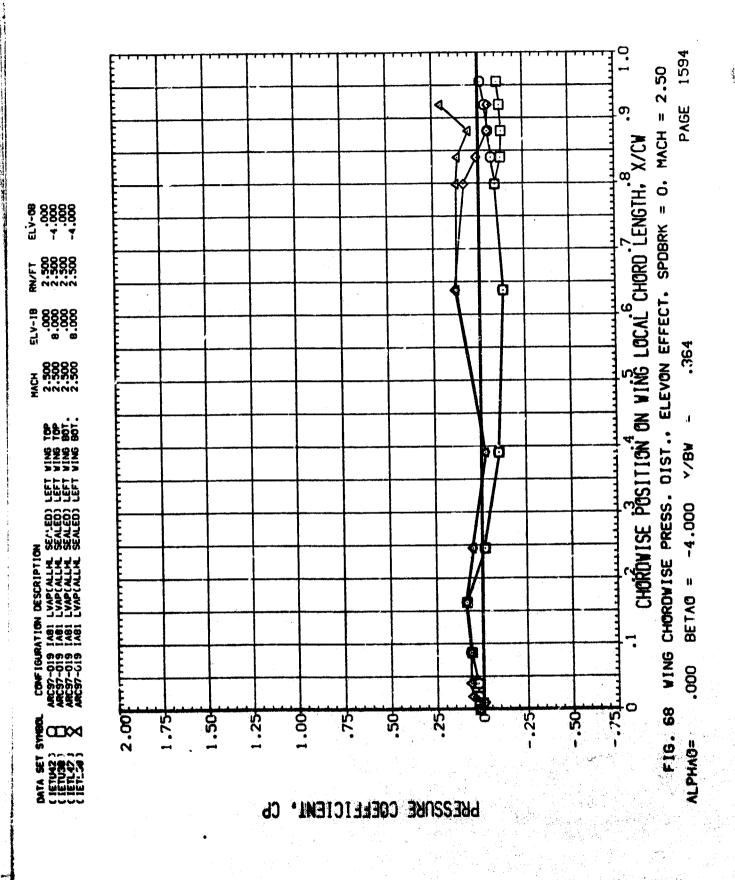
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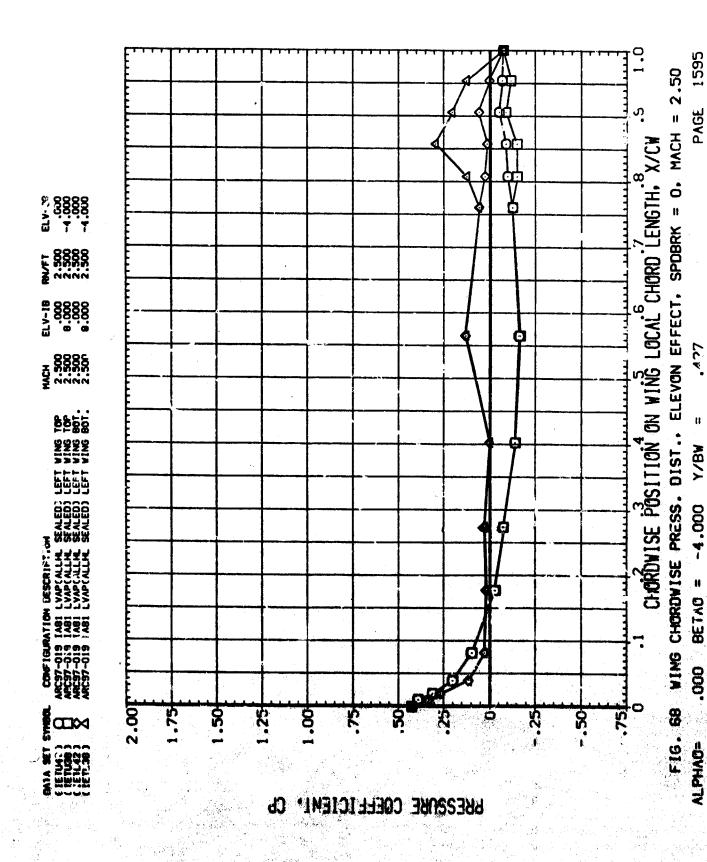
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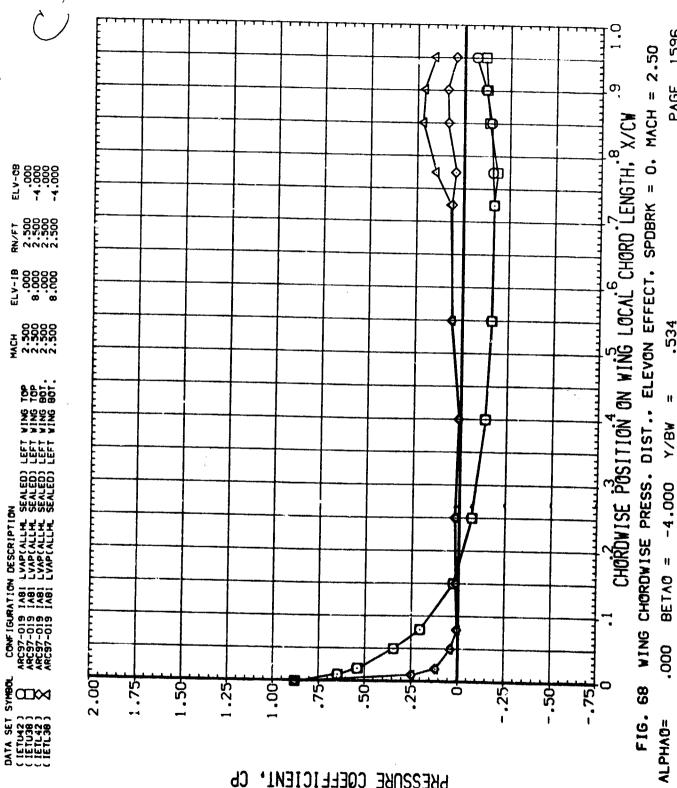
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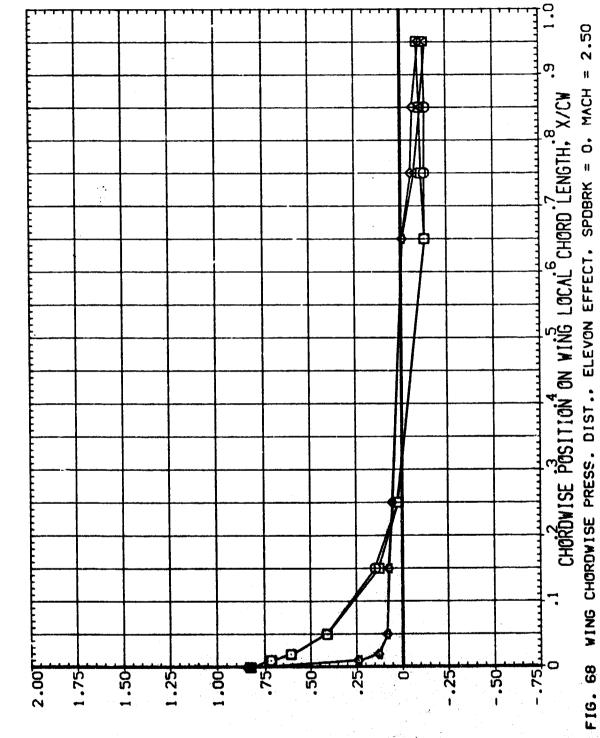
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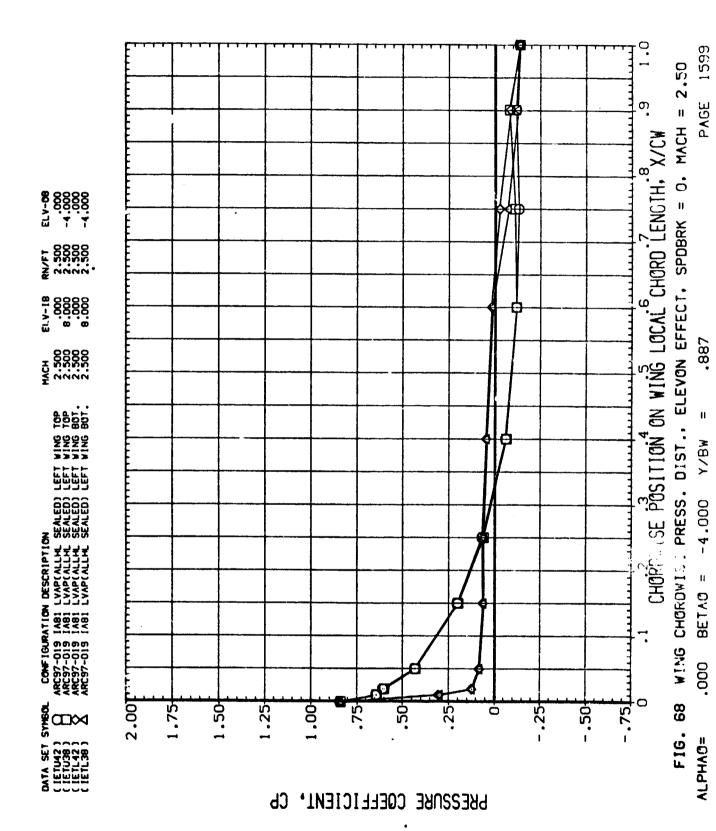
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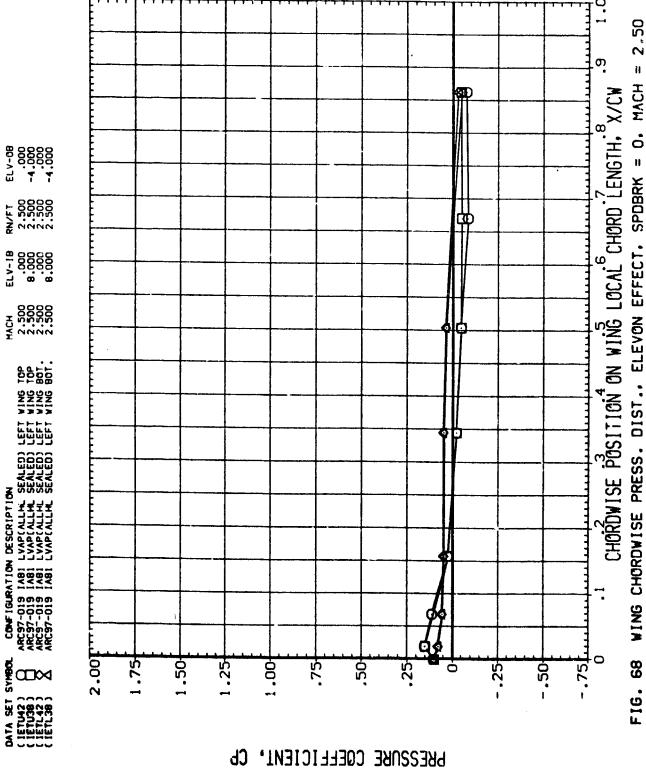
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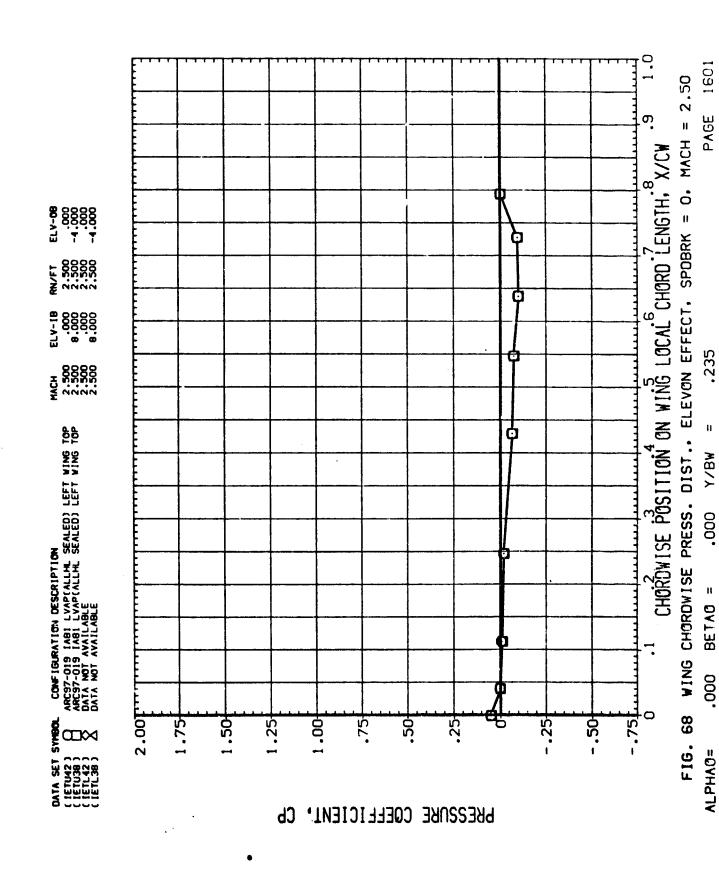
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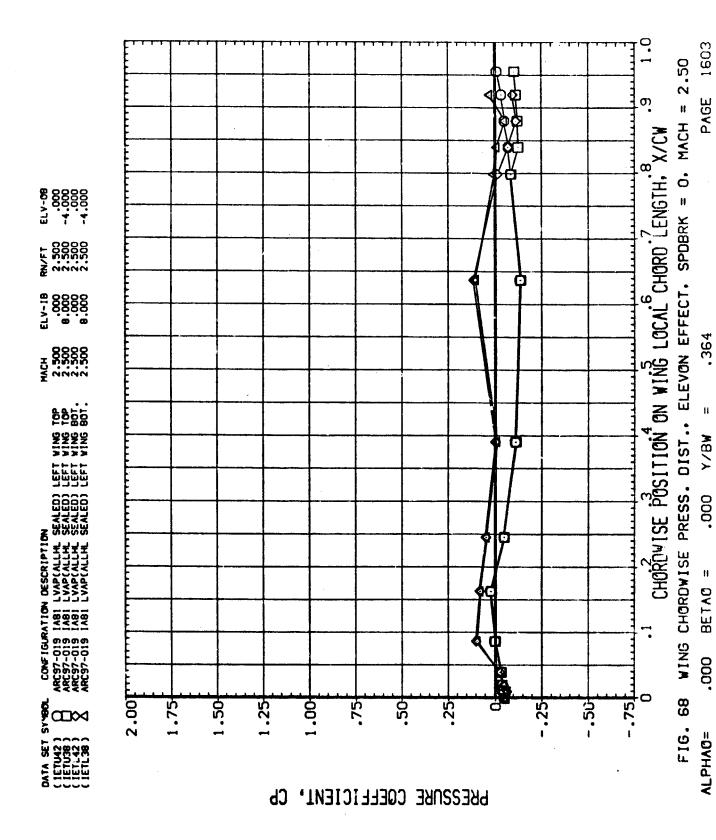
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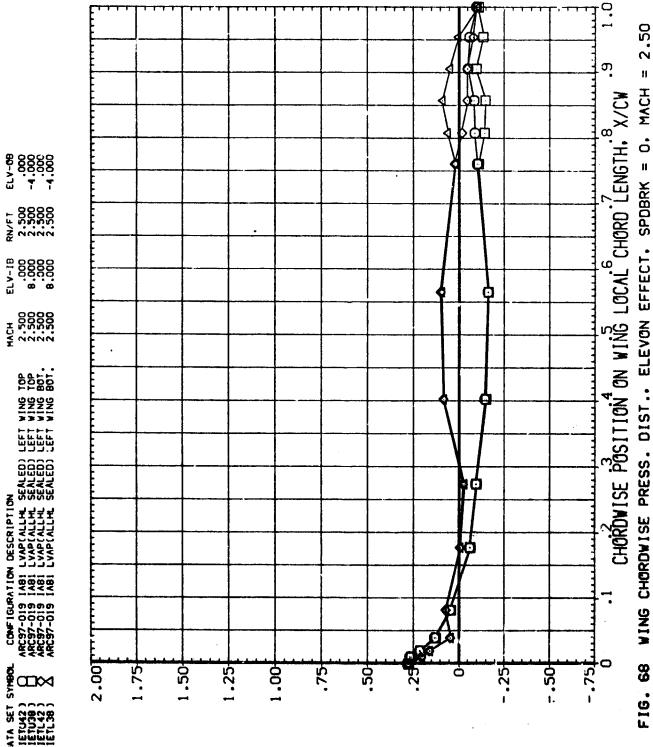
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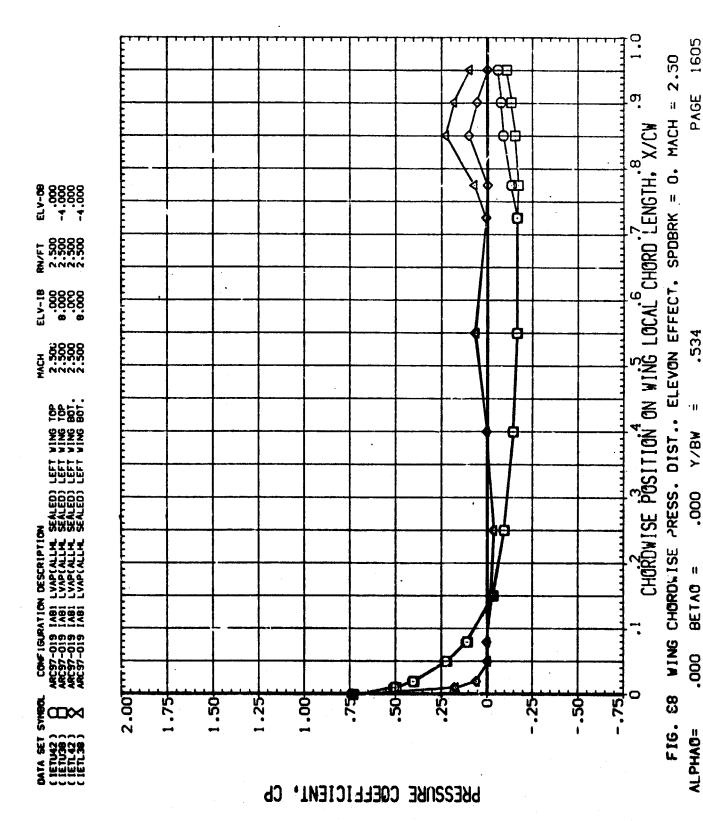
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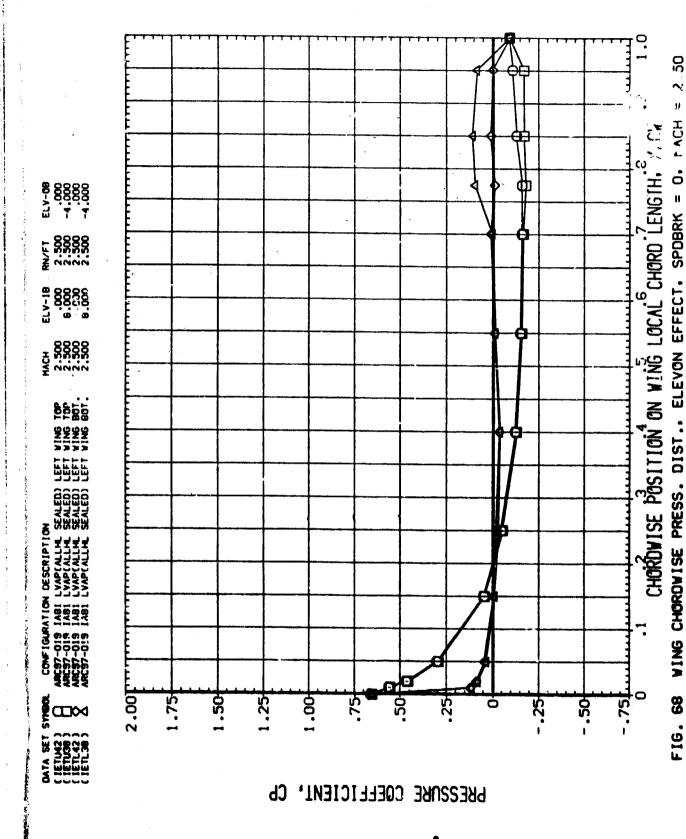
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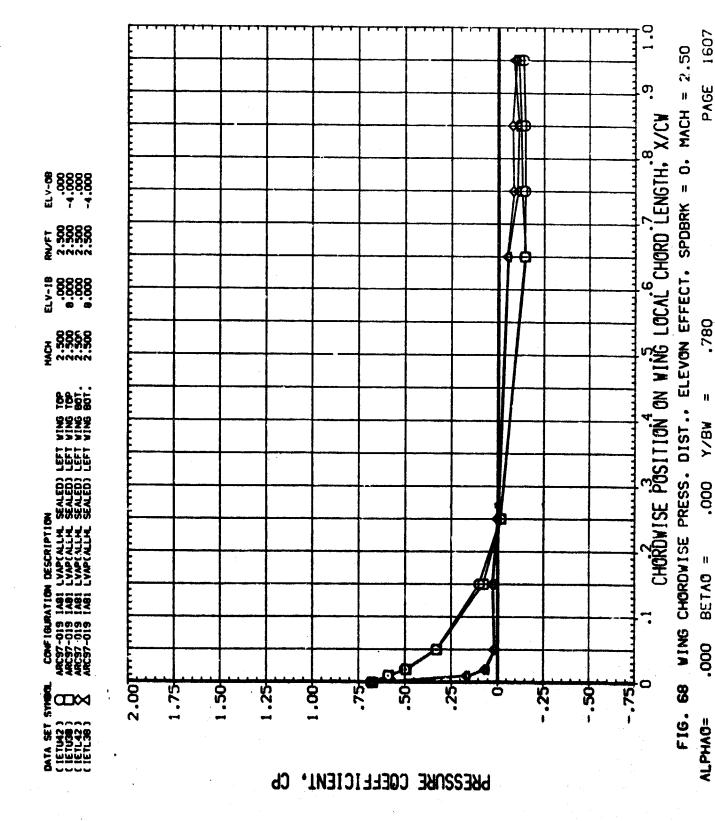
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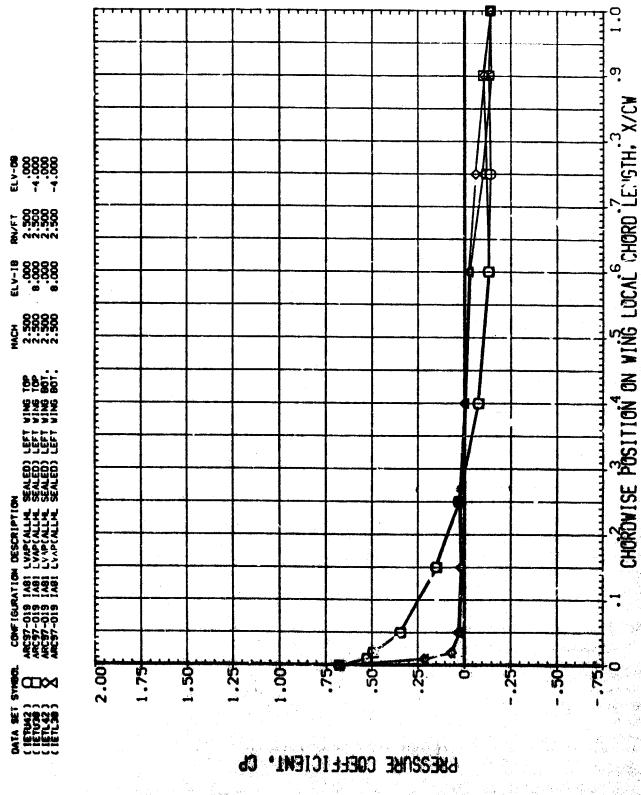
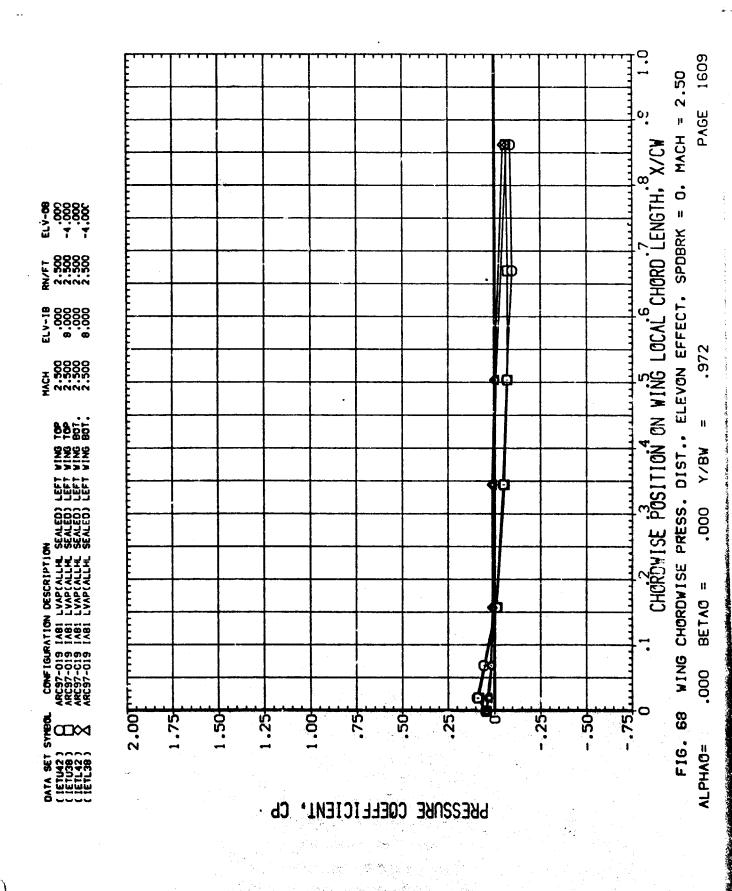


FIG. 68 WING CHUMDWISE PRESS. DIST., ELEVON EFFECT, SPDBRK = 0, MACH = 2.50

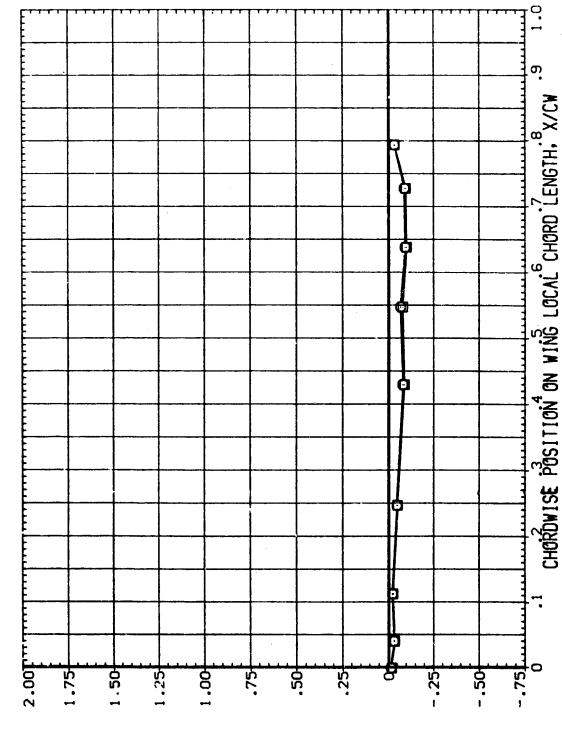
Y/BW 900

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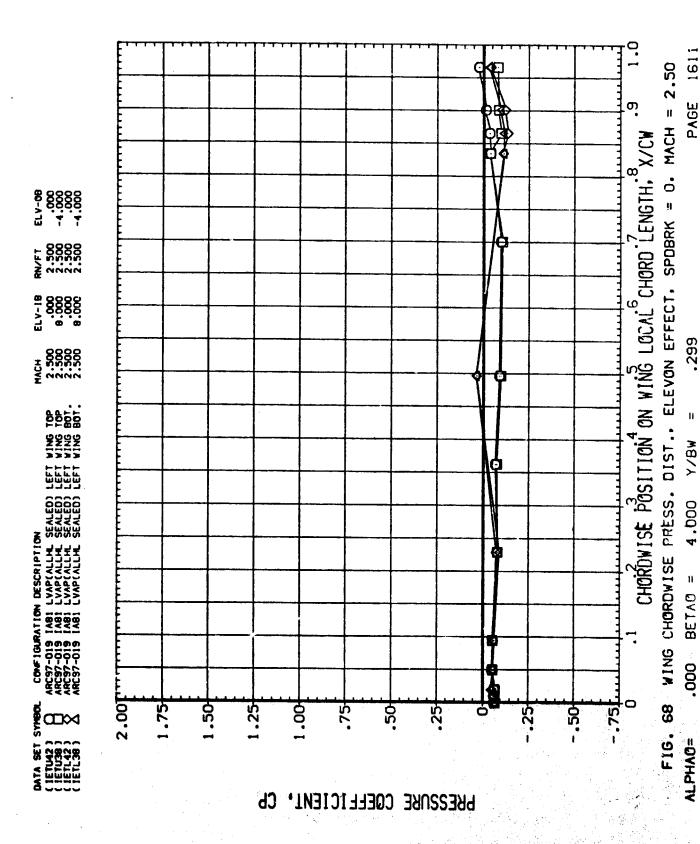


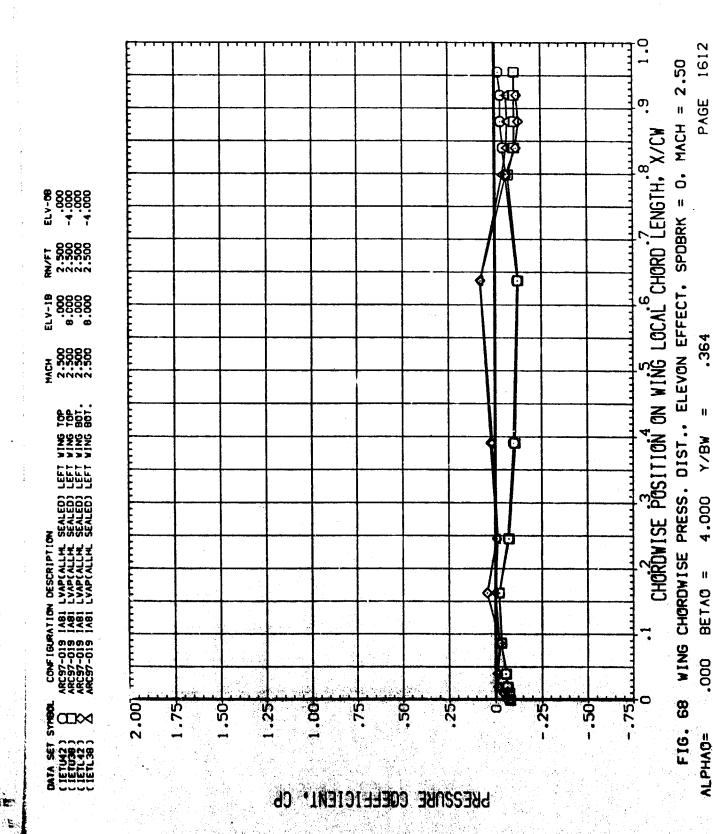


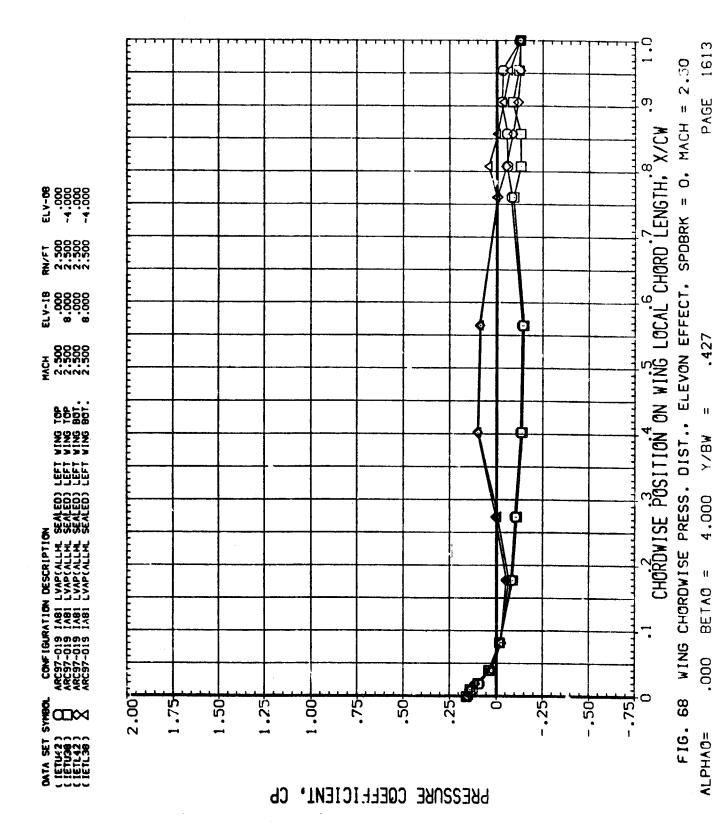


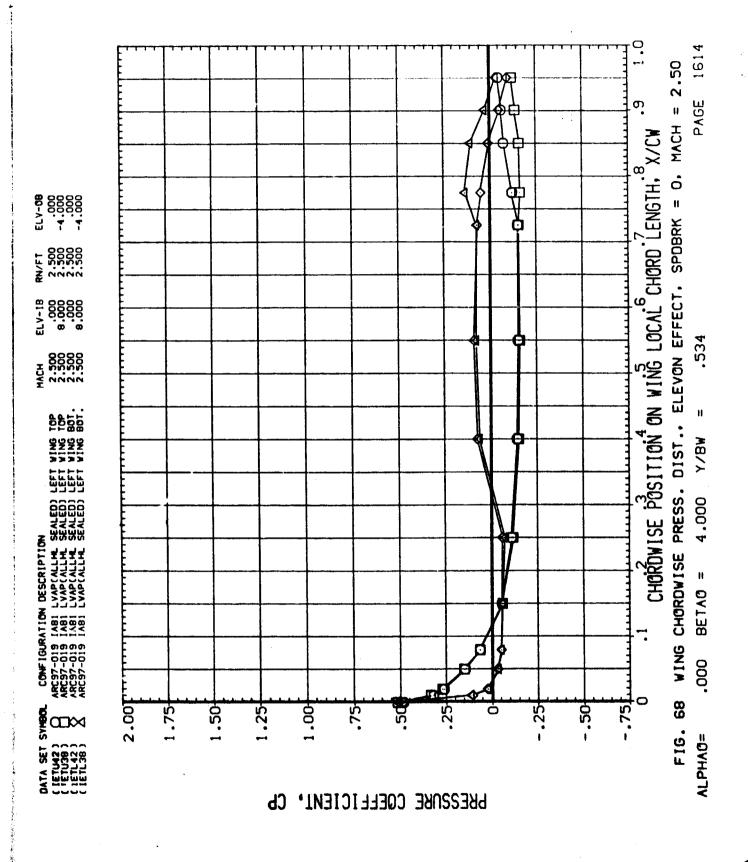
PRESSURE COEFFICIENT,

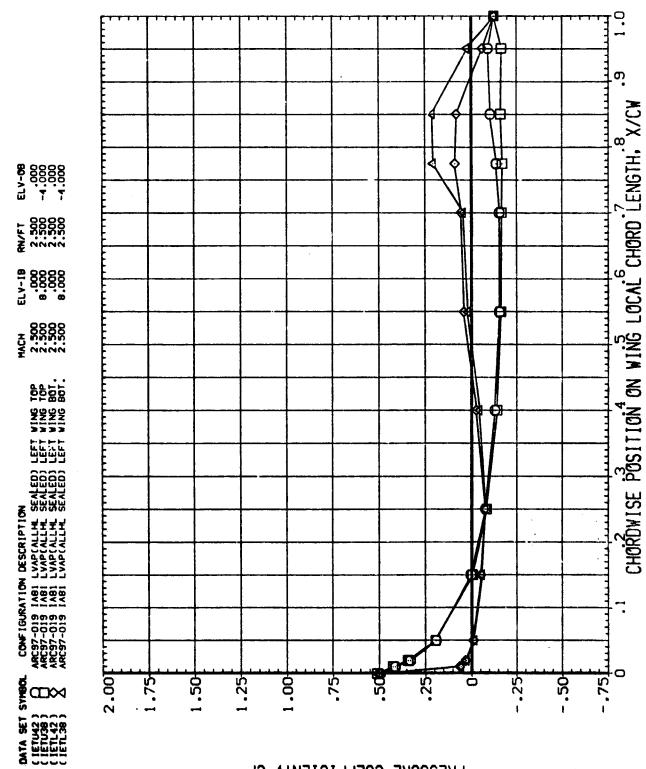
MACH = 2.50WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPOBRK = 0. 4.000 BETAO = FIG. 68 ALPHA0=











PAGE 1815

WING CHORDWISE PRESS. DIST., ELEVON EFFECT, SPOBRK = 0, MACH = 2.50

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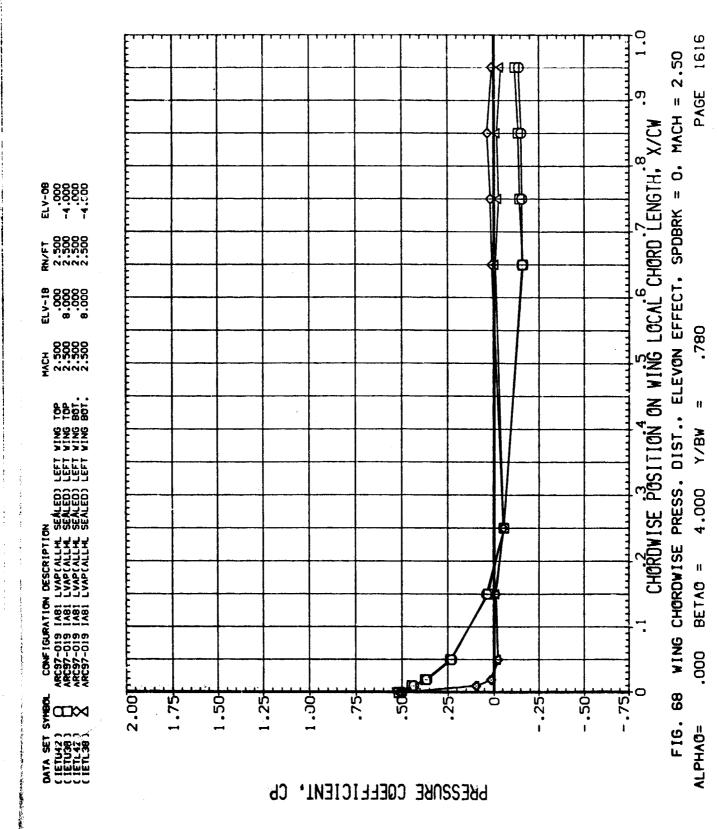
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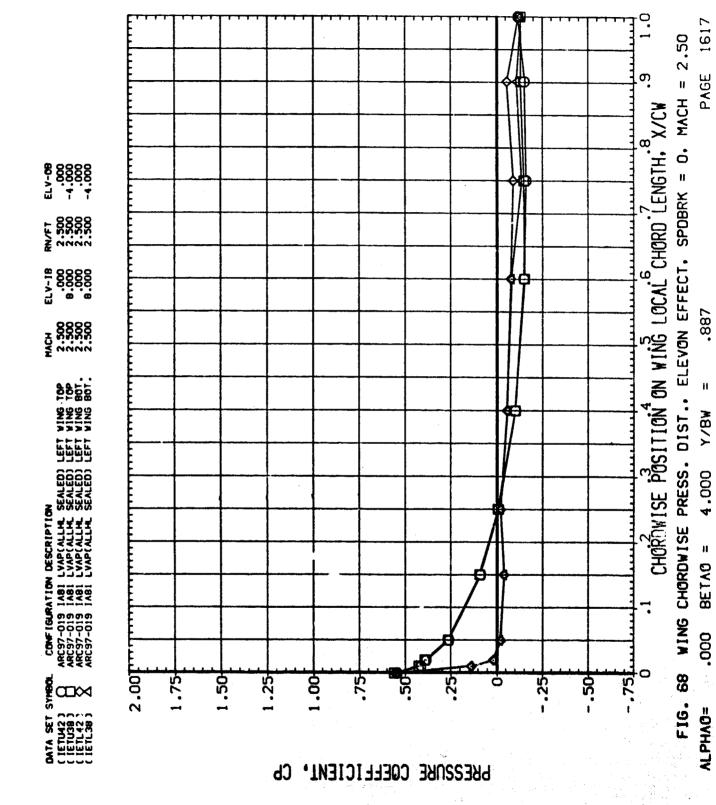
OCO BETAN =

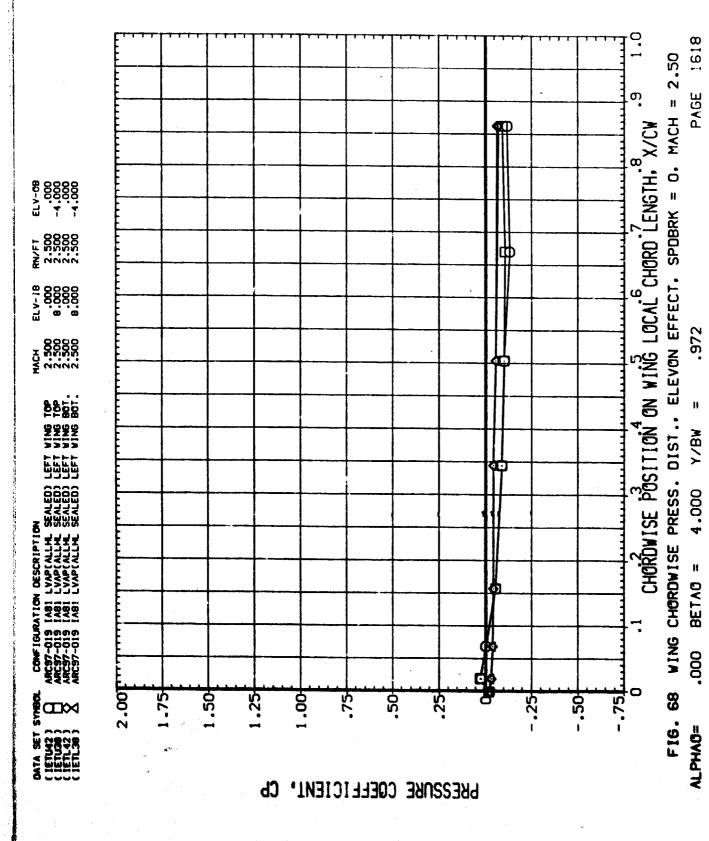
* FIG. 68

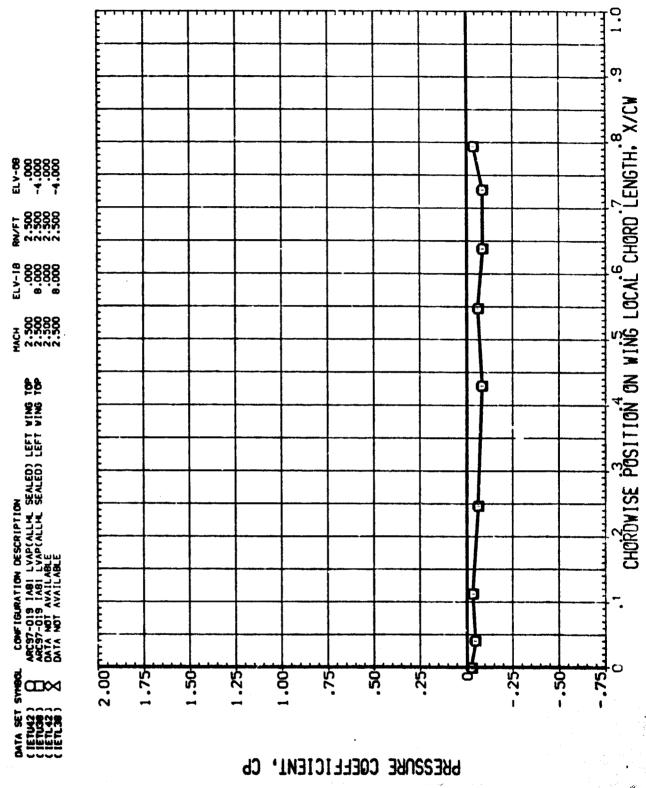
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PRESSURE COEFFICIENT, CP

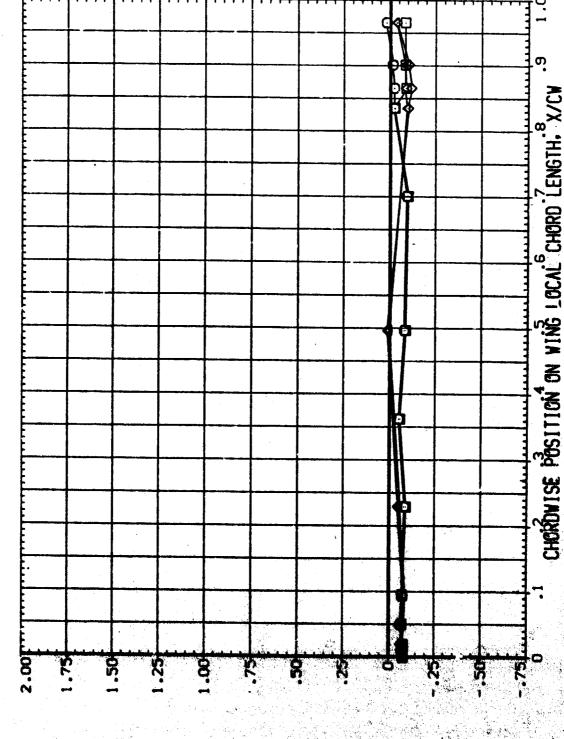






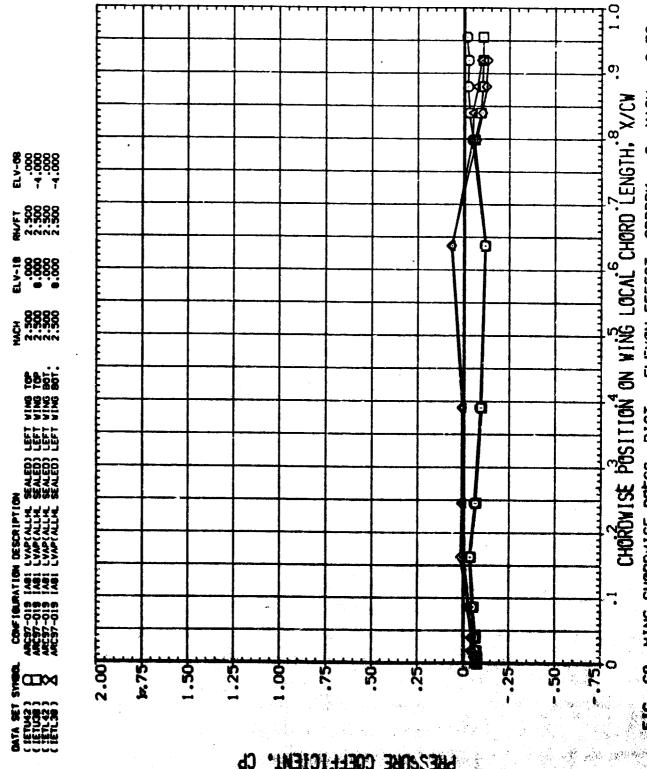


PAGE 1619 WING CHORDWISE PRESS. DIST., ELEVON EFFECT, SPOBRK = 0. MACH = 2.50 .235 Y/BW 6.000 BETAO = 900 FIG. 68 ALPHAD=

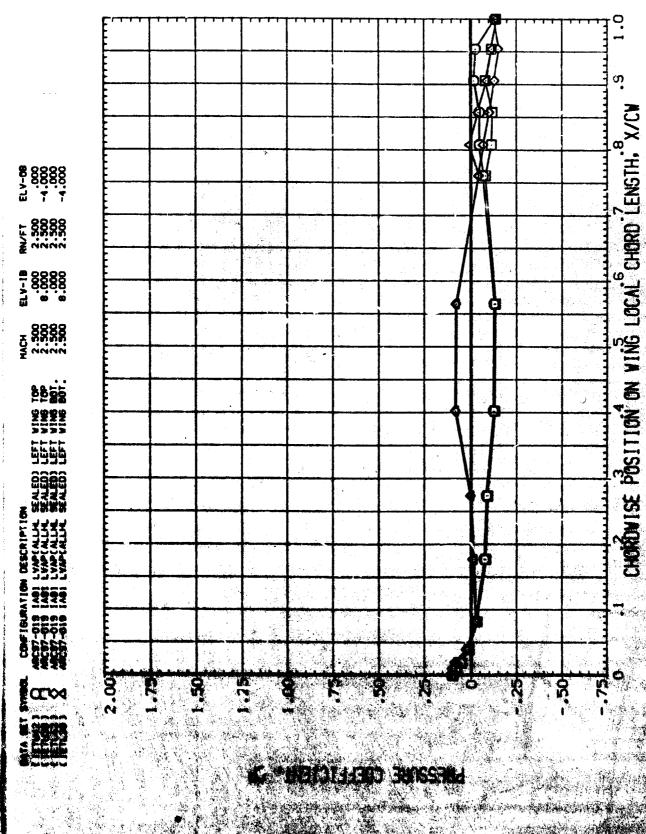


PRESSURE COEFFICIENT, CP.

MACH = 2.50PAGE FIG. 68 VING CHORDVISE PRESS. DIST., ELEVON FFFECT. SPDBRK = 0. 6.000 BETAO =



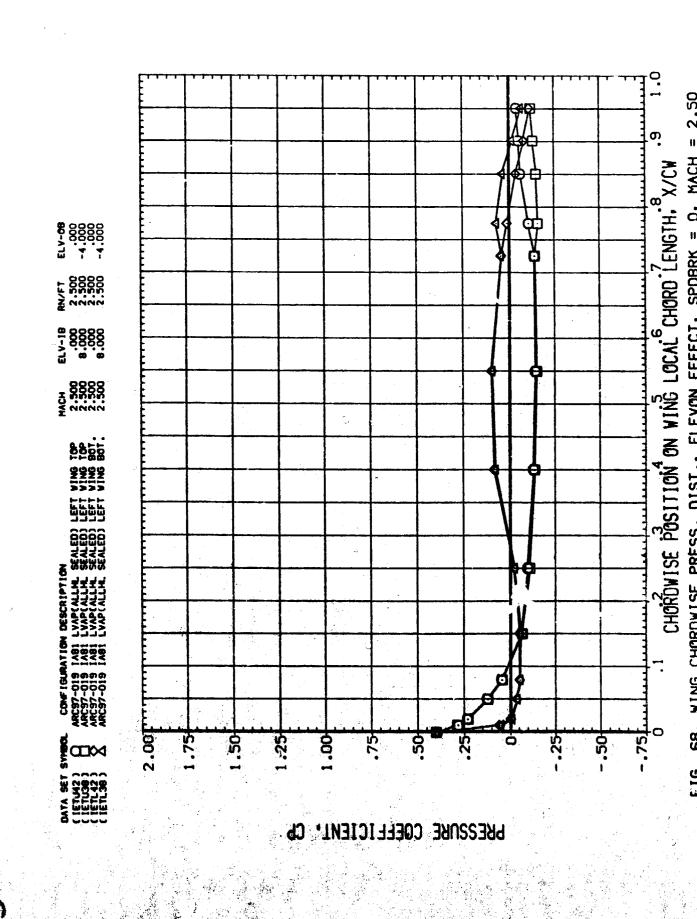
WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPOBRK = 0, MACH = 2.50 PAGE 6.000 BETAG = 90. FIG. 68

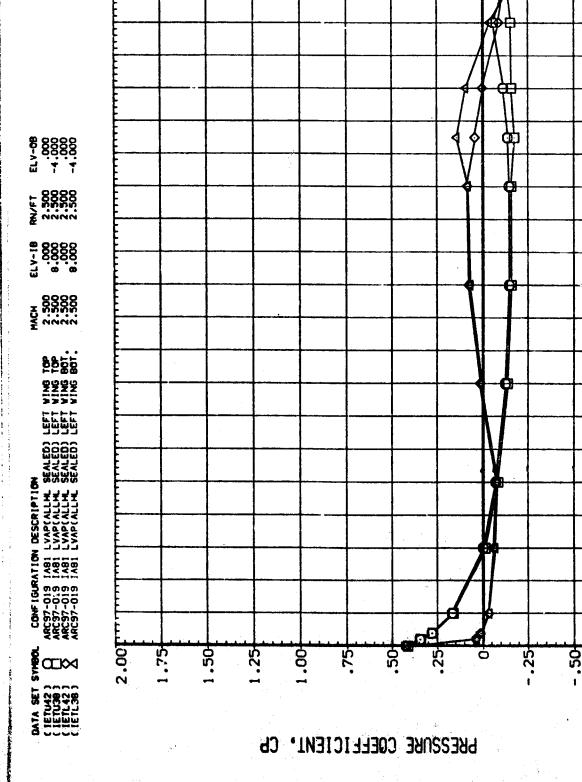


MS CHORDNISE PRESS. DIST., ELEVON EFFECT. SPOBRK = 0. MACH = 2.50

BETAD = 6.000 Y/BW = .427

PAGE 162





PAGE 1624 FIG. 68 WING CHORDWISE PRESS. DIST., ELEVON EFFECT, SPOBRK = 0, MACH = 2.50 CHORDWISE POSITION ON WING LOCAL CHORD LENGTH, 8X/CW .673 #1 **X/8**M 6.000 BETAC = 000. ALPHAG=

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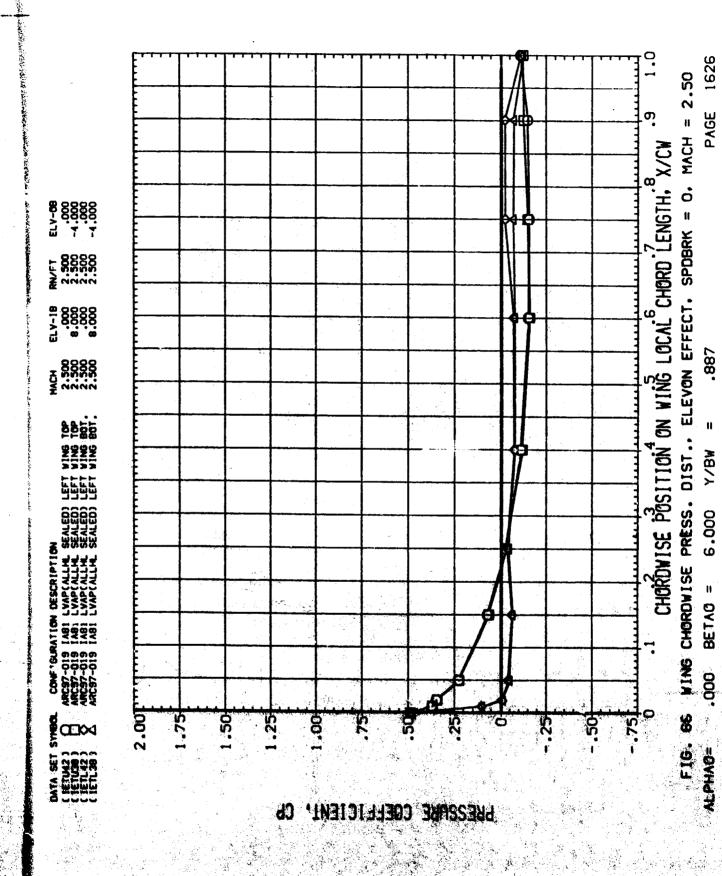
Y/BW

6.000

BETAO =

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AL PHAO=



PAGE 1627

.972

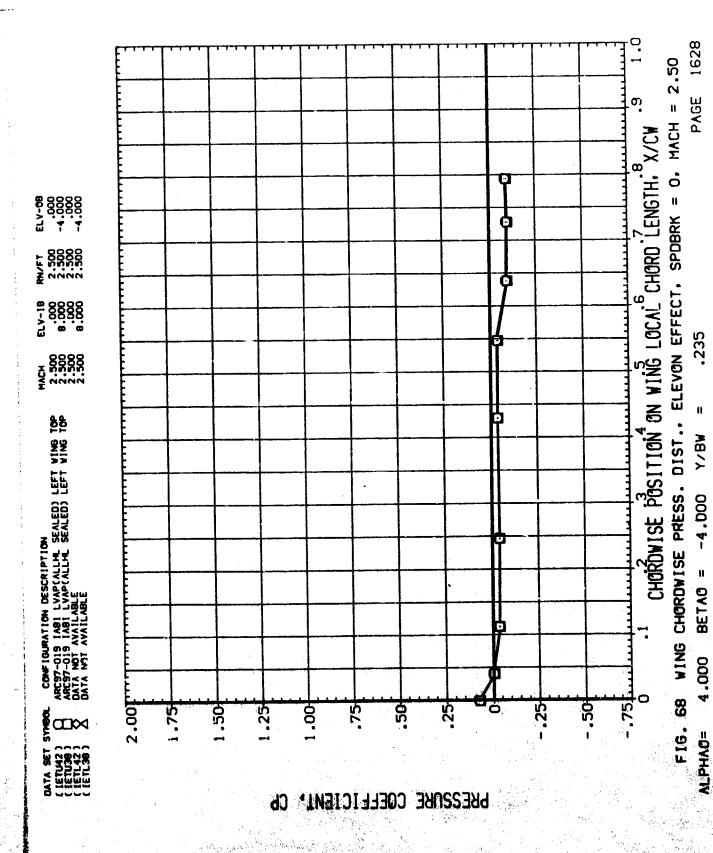
Y/BW

6.000

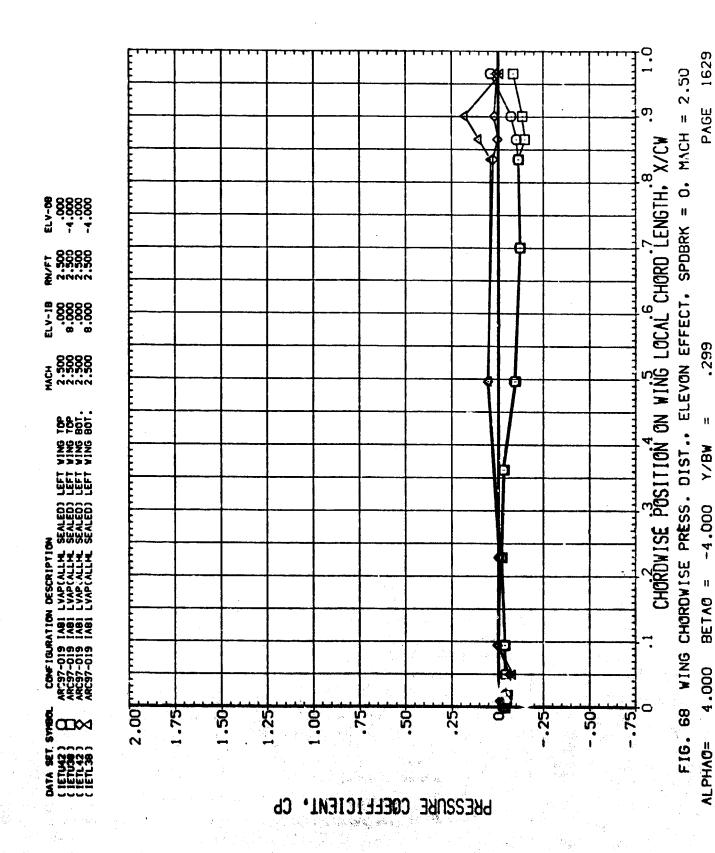
BETAO =

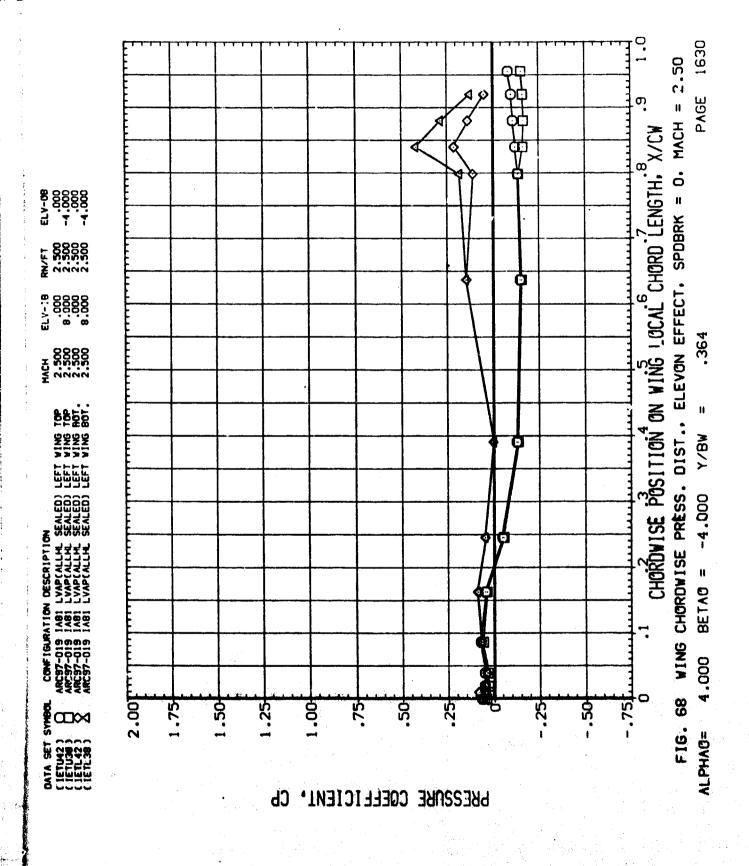
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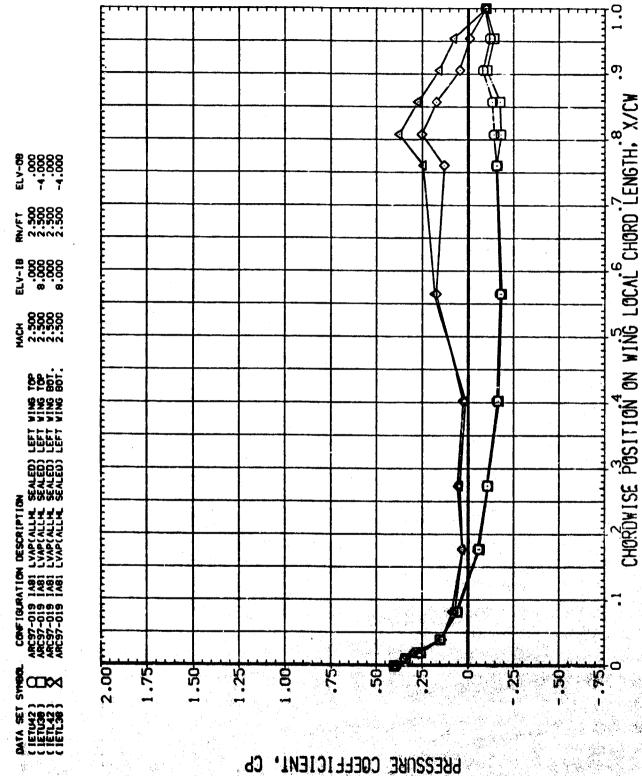


FIG. 68 WING CHORDWISE PRESS. DIST., ELEVON EFFECT, SPOBRK = 0. MACH = 2.50 .427 Y/BW -4.000 BETAO = ALPHA0= 4.000

PAGE 1631

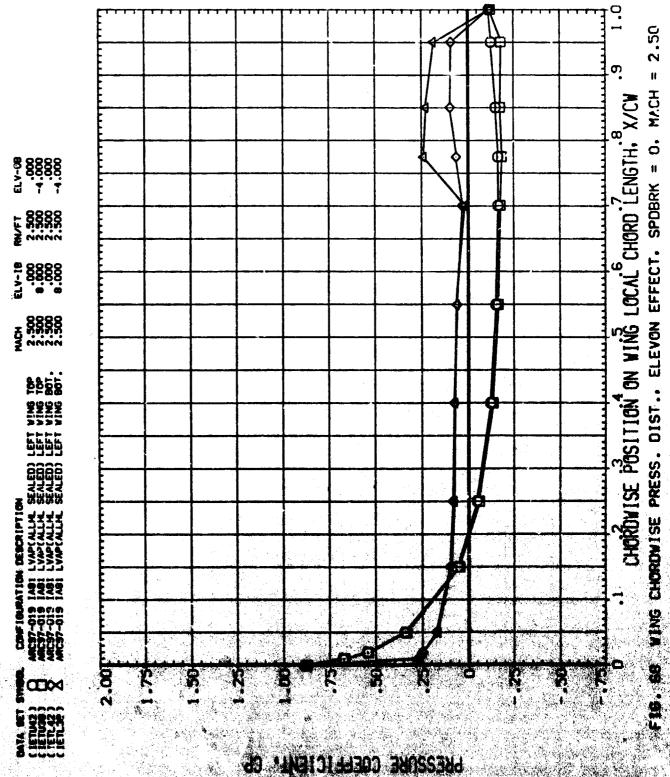
CHORDWISE POSITION ON WING LOCAL CHORD LENGTH, X/CW 3 1 ELV-08. ELV-18 8.000 9.000 8.000 WING TOP WING BOT. WING BOT. "PRESSURE COEFFICIENT.

PAGE

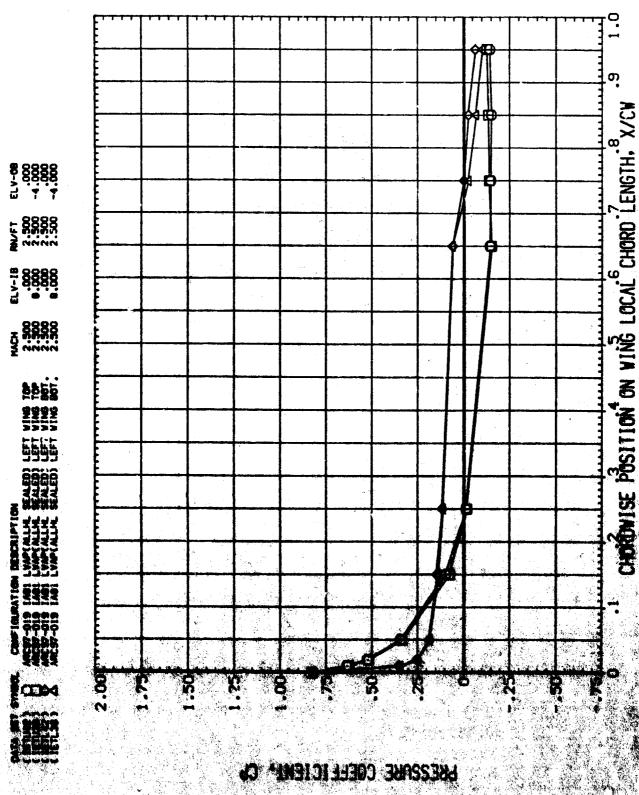
Y/BW

-4.000

BETAO =



1633 PAGE .673 Y/BW ALPHAD= * 4.000 BETAD = -4.000



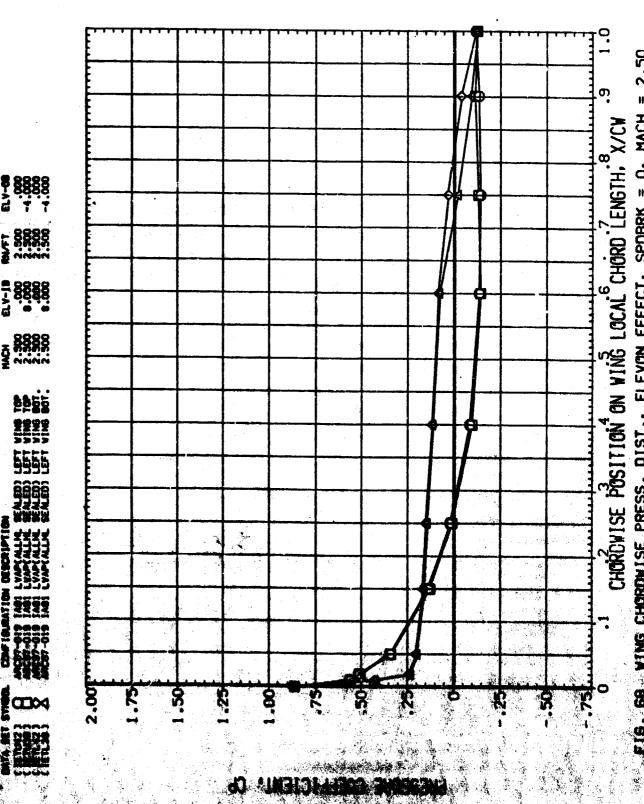
PAGE 1634

CHORDWISE PRESS. DIST., ELEVON EFFECT. SPDBRK = 0. MACH = 2.50

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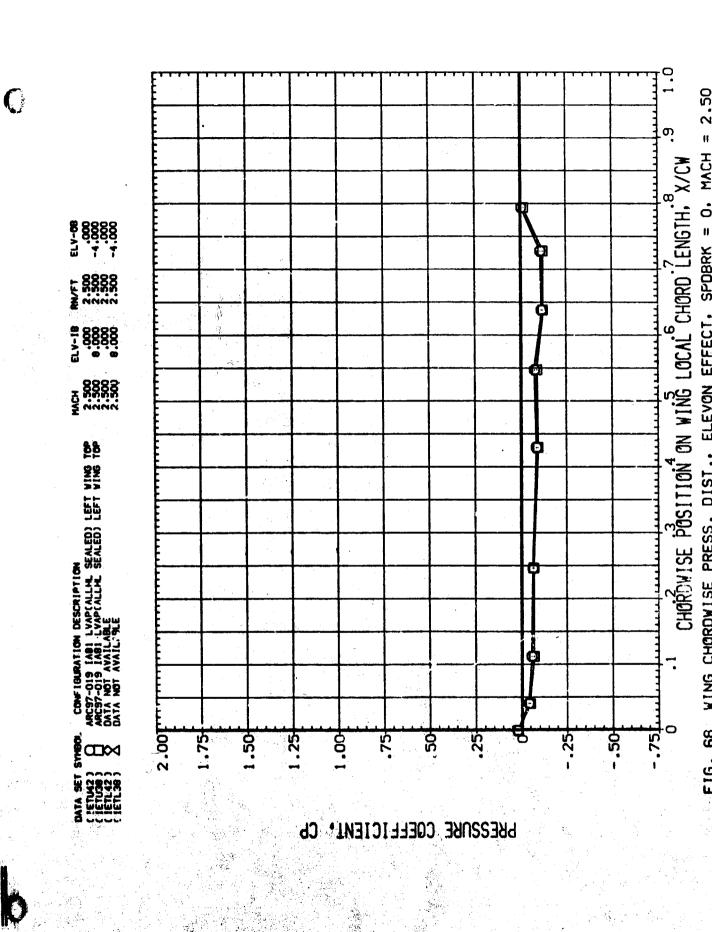
Y/BW

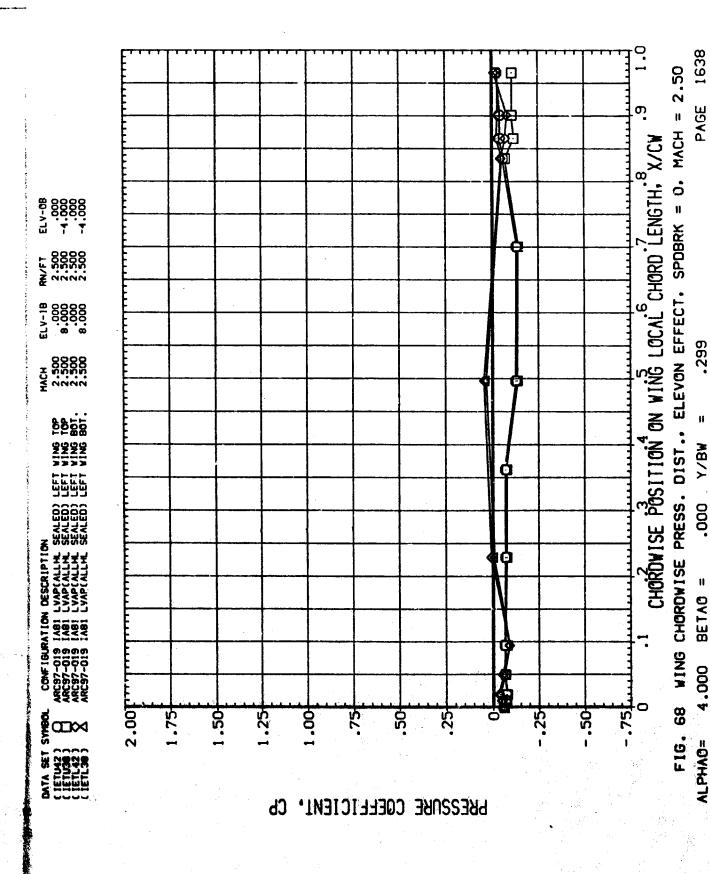
-4.000



1635 FIG. 68 WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPOBRK = 0, MACH = 2.50 PAGE Y/BW -4.000 4,000 BETA0 =

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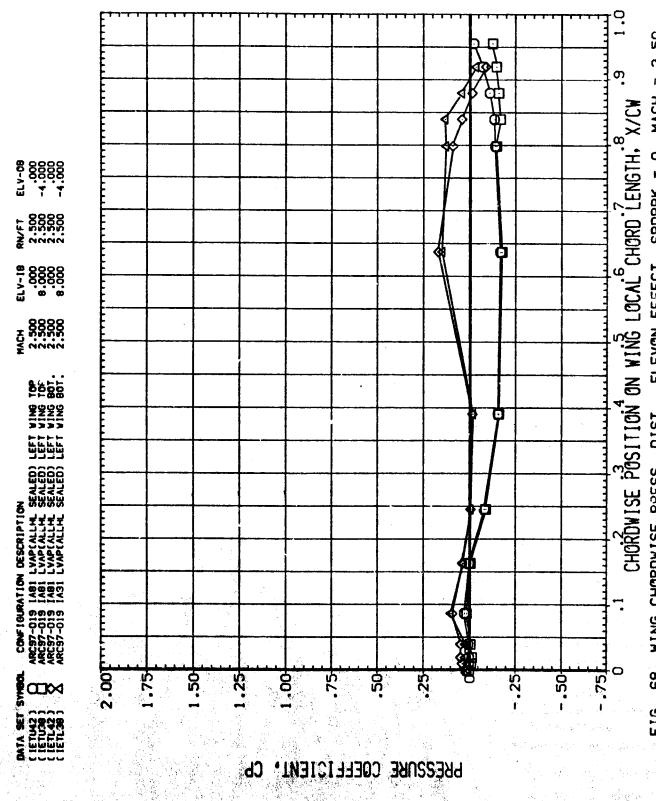
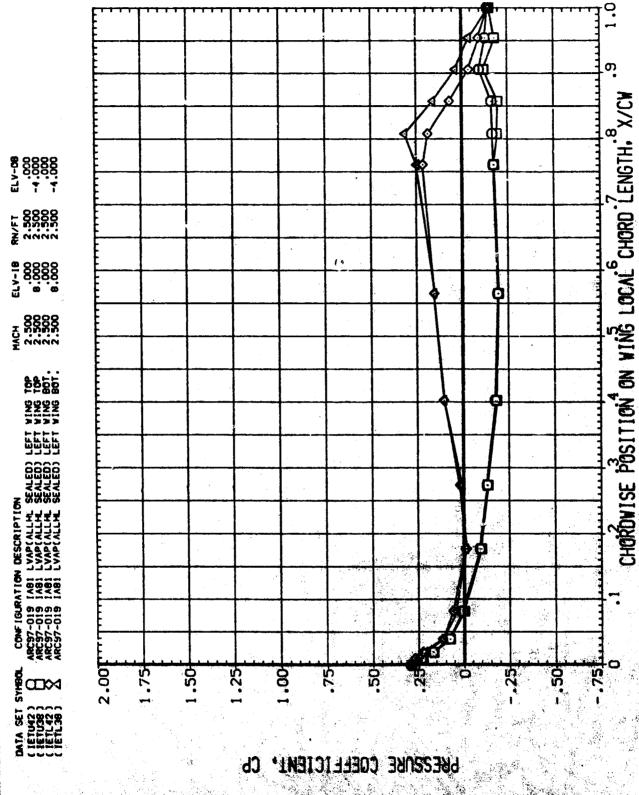


FIG. 68 WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPOBRK = 0, MACH = 2.50 PAGE 000. BETAO = 4.000 ALPHAG=



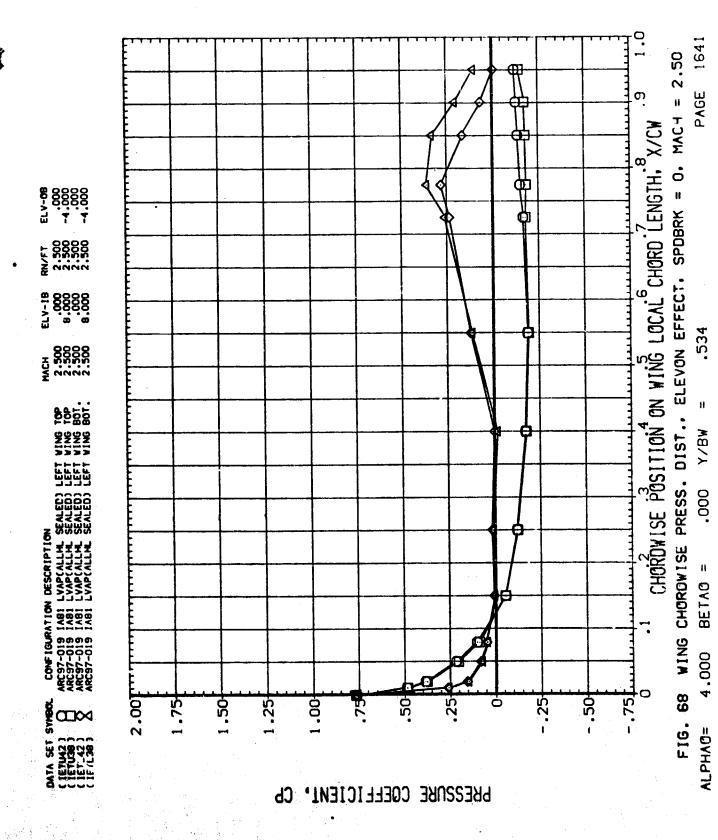
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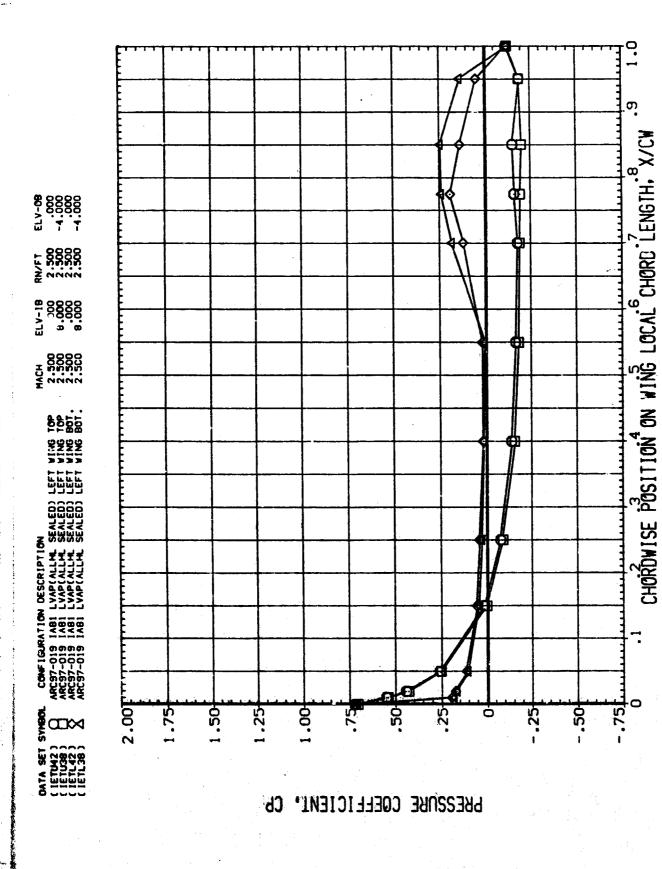
Y/BW

BETAG =

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PAGE 1642

WING CHORDWISE PRESS. DIST., ELEVON EFFECT, SPOBRK = 0. MACH = 2.50

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Y/BW

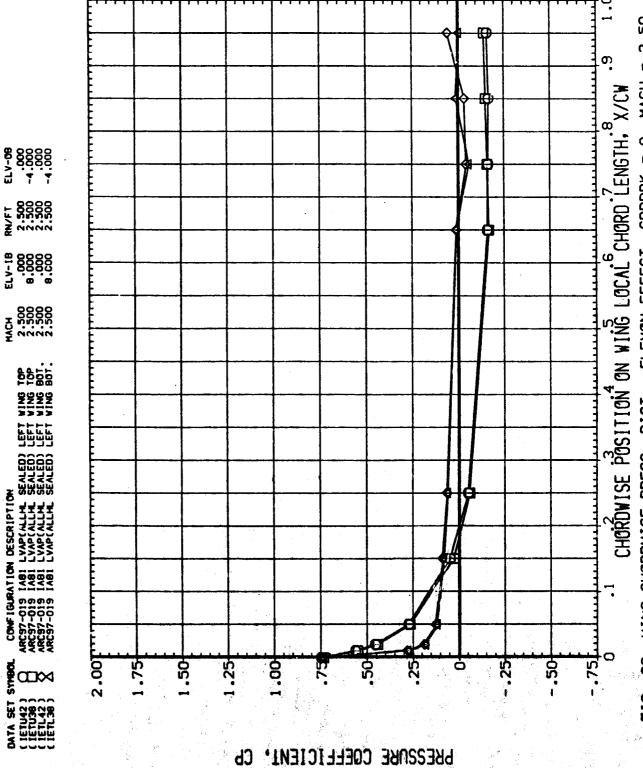
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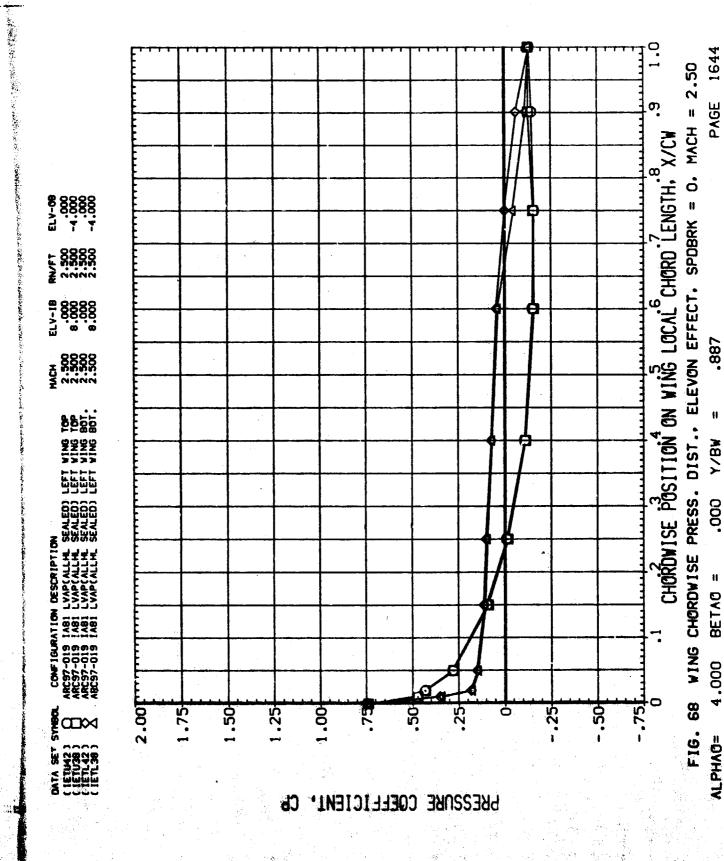
ALPHA0=

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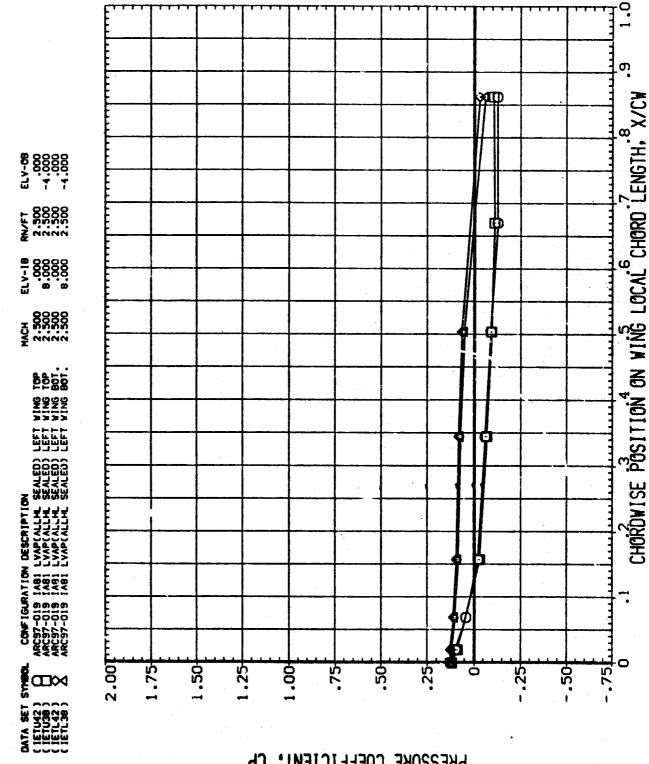


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PAGE 1643 FIG. 68 WING CHORDWISE PRESS. DIST., ELEVON EFFECT. SPDBRK = 0, MACH = 2.50 Y/BW 000. BETAC = ALPHA0= 4.000



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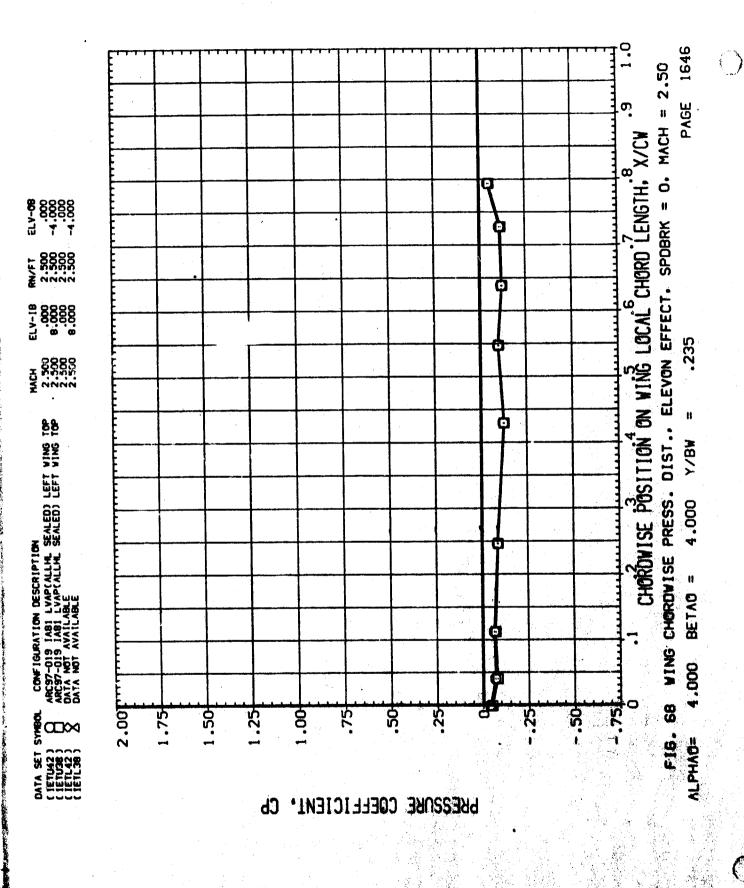
FIG. 68 WING CHORDWISE PRESS. DIST., ELEVON EFFECT, SPOBRK = 0, MACH = 2.50

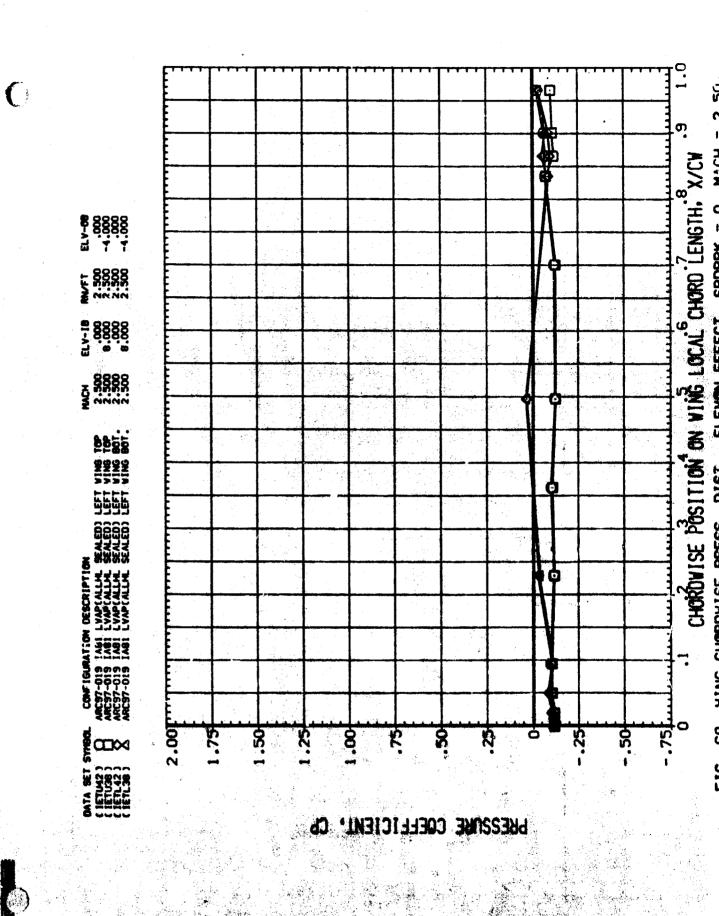
.OOO Y/RW

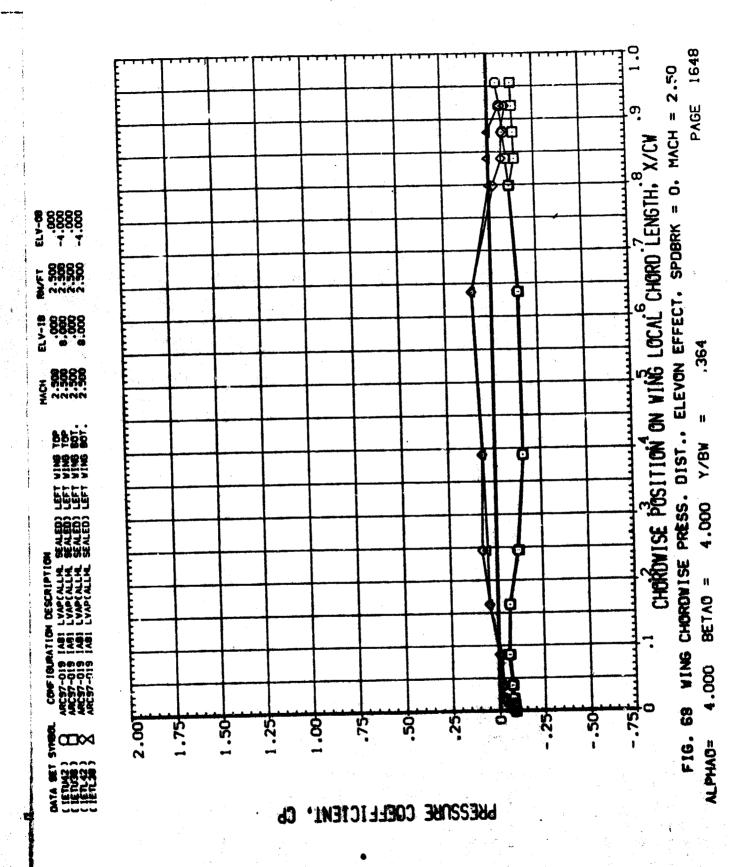
4.000 BETAG =

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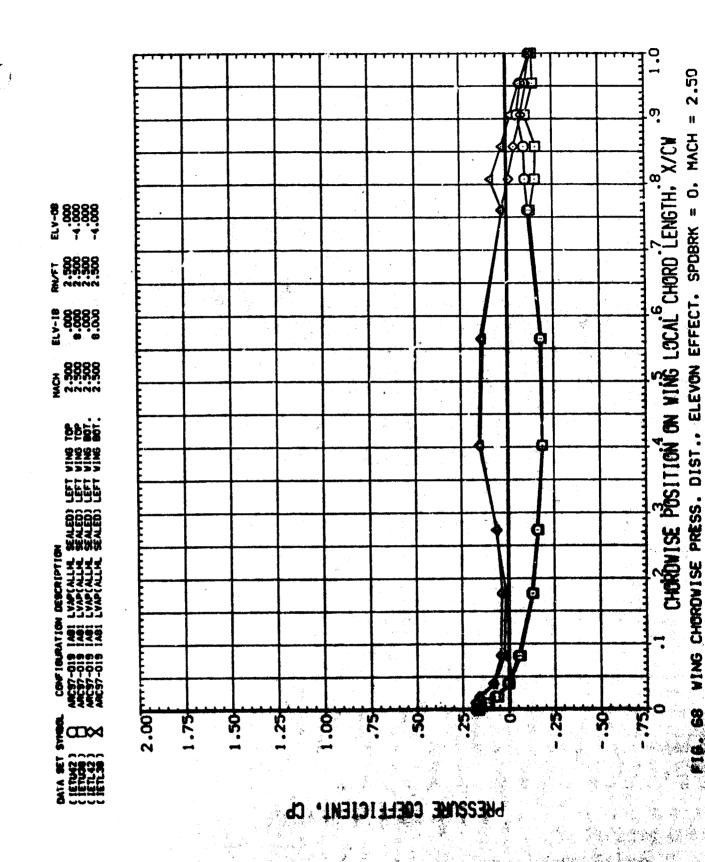
PRESSURE COEFFICIENT,







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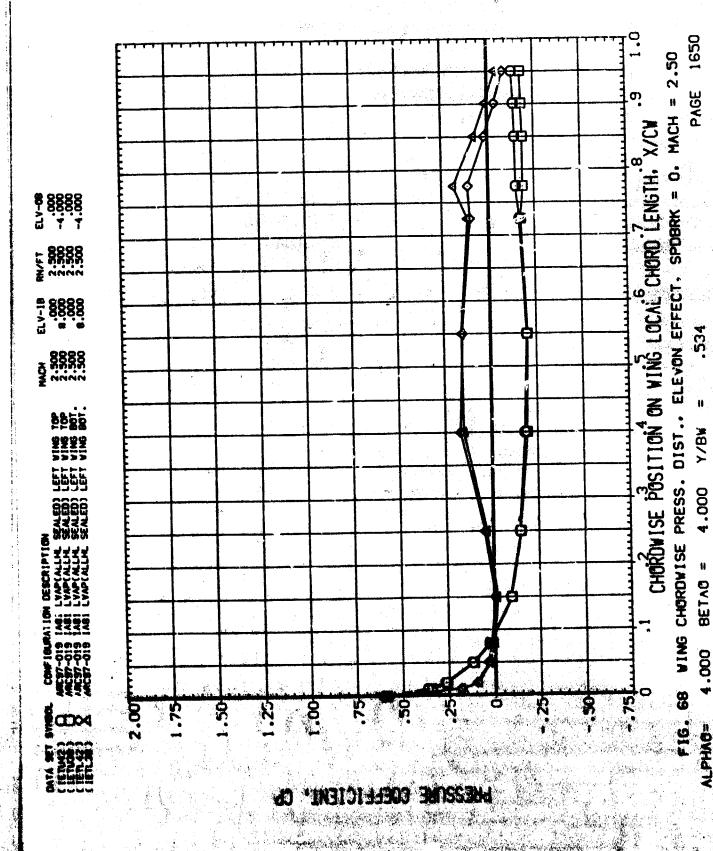
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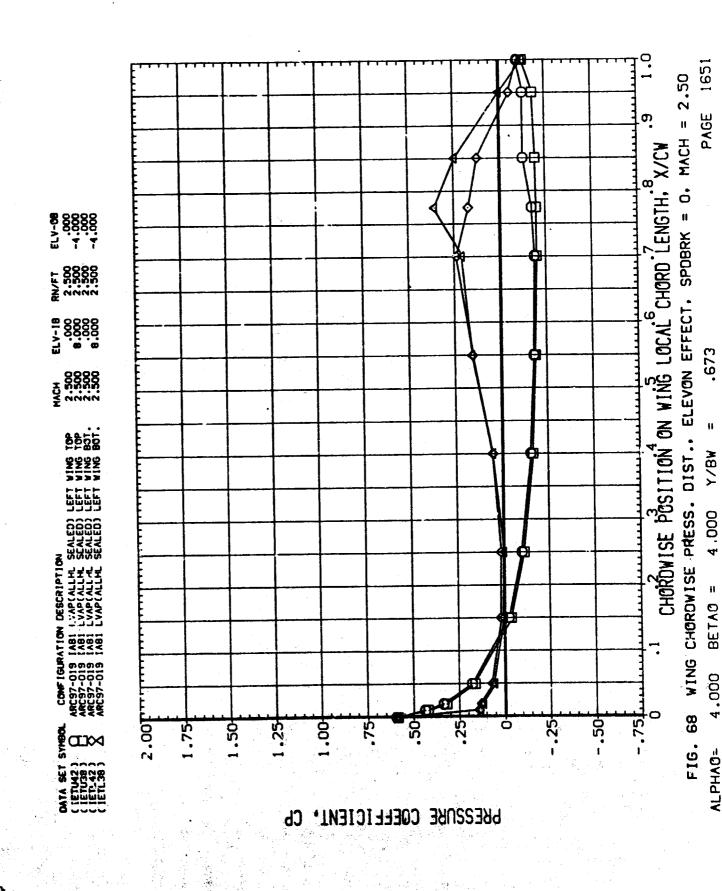
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Y/BW

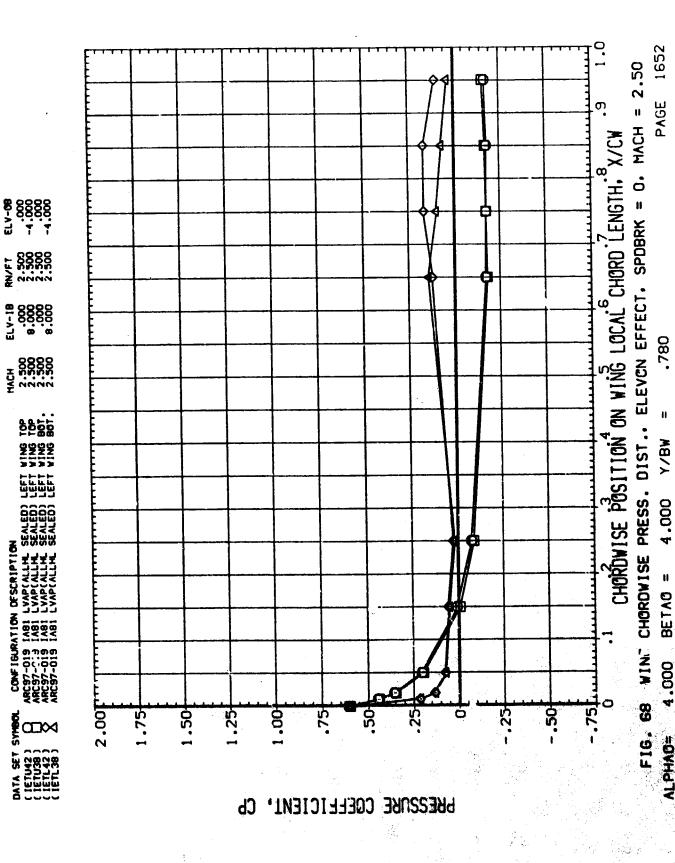
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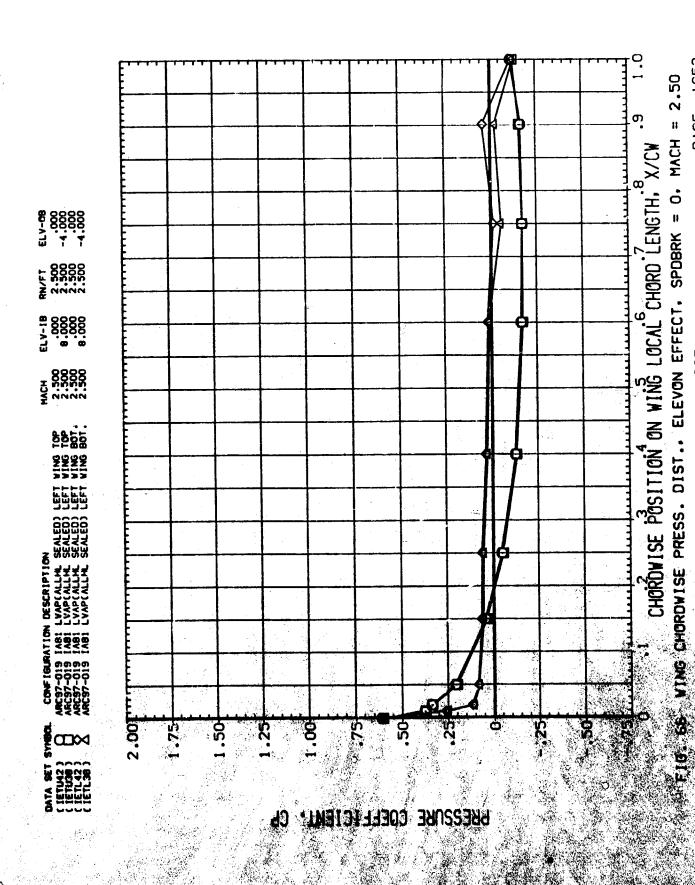
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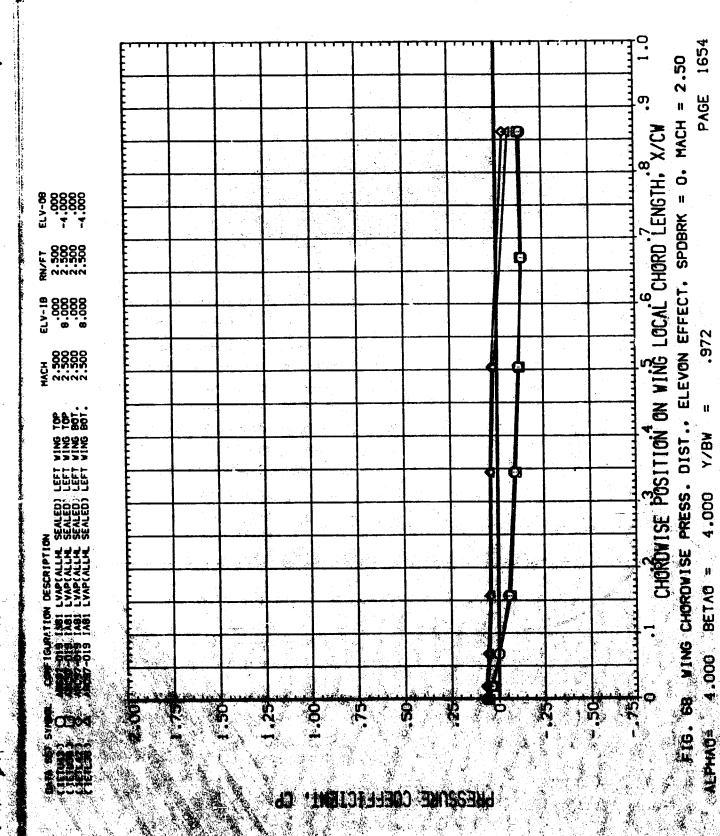




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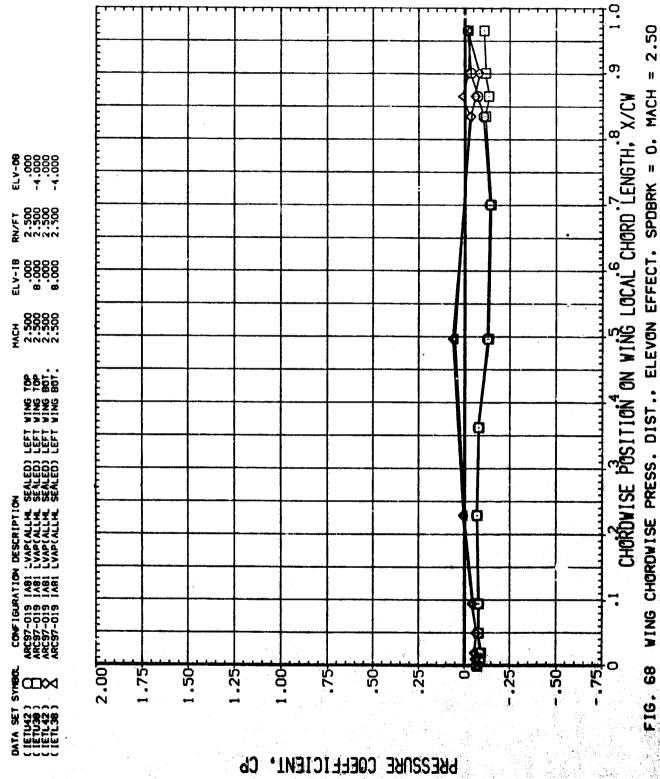
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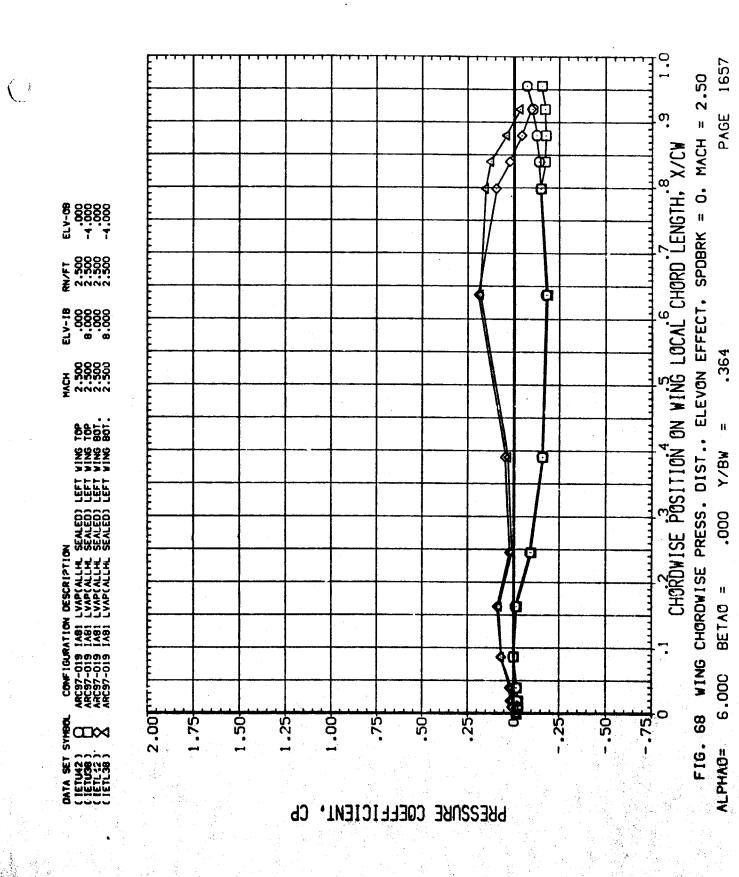
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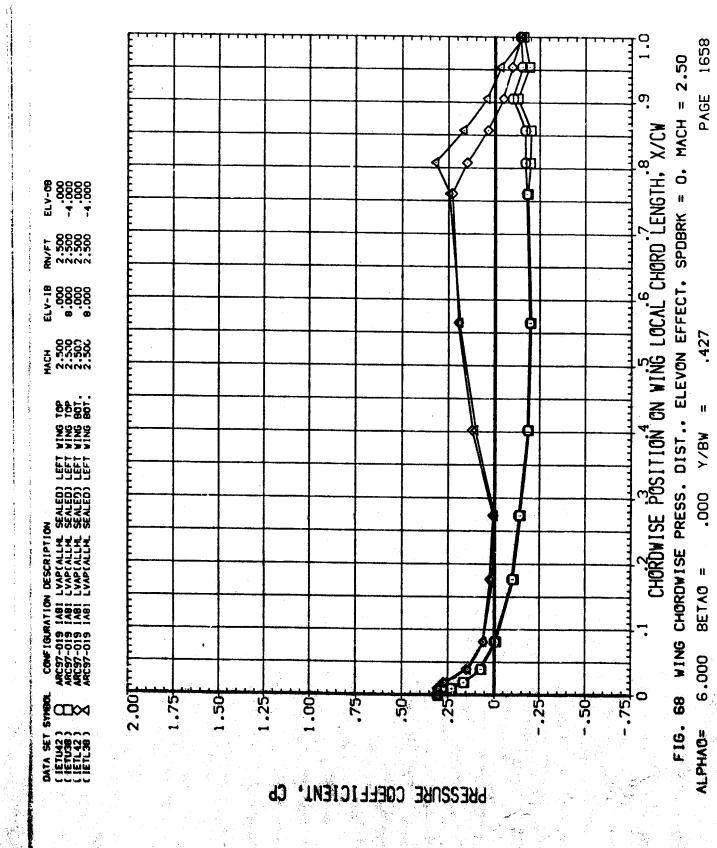
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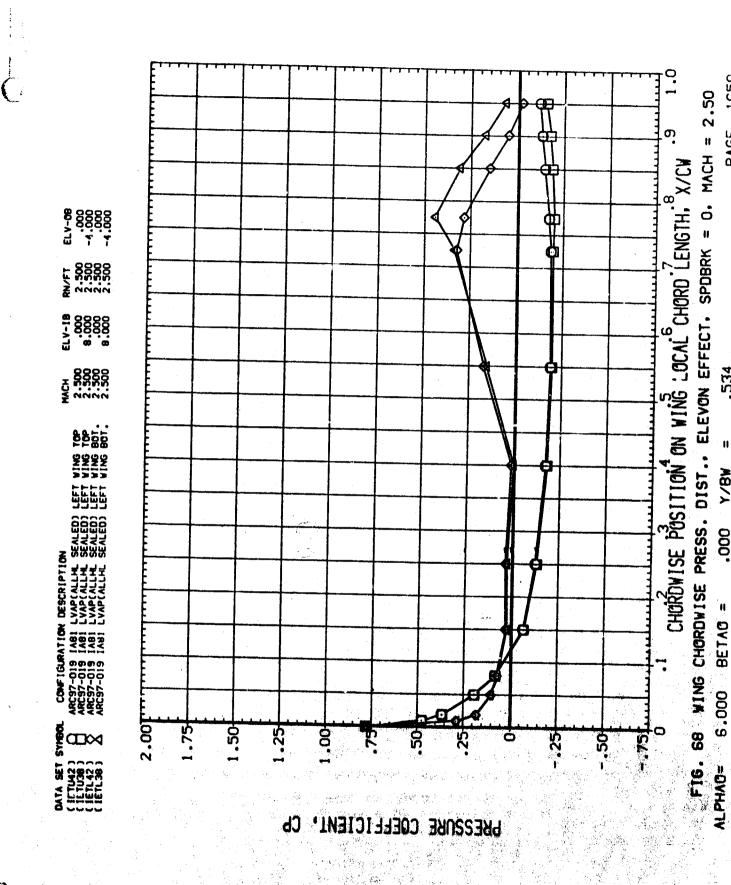
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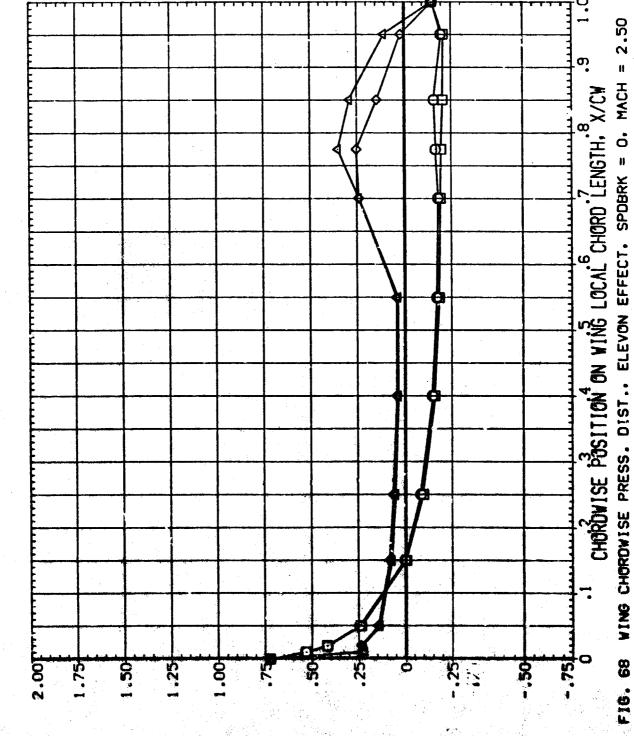






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BETAO =

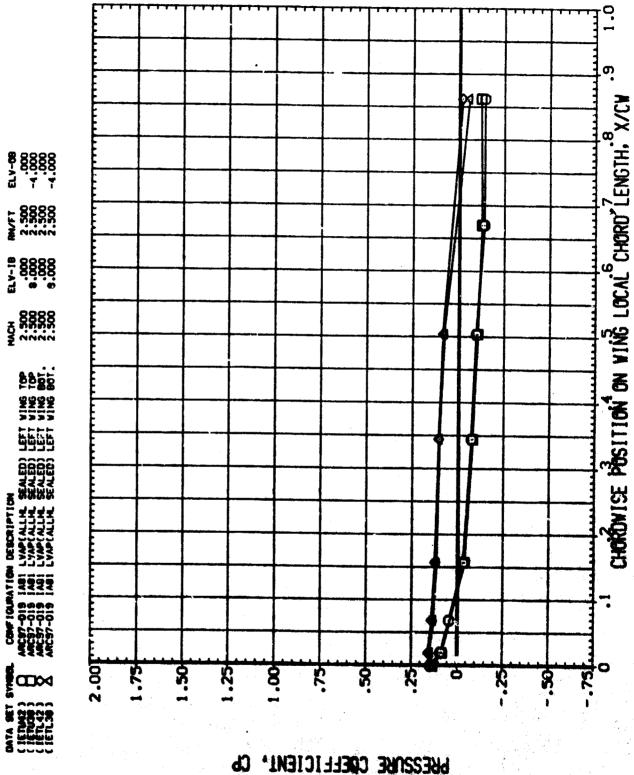
6.000

ALPHAD=

COEFFICIENT, PRESSURE

MACH = 2.50CHORDWISE POSITION ON WING LOCAL CHORD LENGTH, BY/CH ELV-08 -4-000 -4-000 -4-000 * 22.22 * 20.22 * 20.00 * 20.0 ELV-18 3.000 8.000 8.000 9959 9955 11. ARC97-019 ARC97-019 ARC97-019 2.00T 1.75 .25 8 Š. 8 -.25 <u>8</u>.. PRESSURE COEFFICIENT,

PAGE WING CHOROWISE PRESS. DIST., ELEVON EFFECT, SPOBRK = 0. Y/BW 900 6.000 F16. 68 ALPHA0=



1663 FIG. 68 VING CHOROVISE PRESS. DIST.. ELEVON EFFECT. SPDBRK = 0. MACH = 2.50 PAGE Y/BW 000 BETAB = 000.9 ALPHAD=